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In the Superior Court

OF THE

COUNTY OF SACRAMENTO,

STATE OF CALIFORNIA.

THE PEOPLE OF THE STATE OF
CALIFORNIA,

Plaintiff,

vs.

THE GOLD RUN DITCH AND MINING
COMPANY,

Defendant.

Stipulation.

It is hereby stipulated that the transcription, in long hand, of the notes of testimony taken by the phonographic reporter in this case, and contained in 45 bound volumes, now on file in said Court, shall constitute so far forth, the record herein, and that either party may add thereto, as preliminary matter, or by way of specification or other addendum that may be necessary, such matter as will convert the same into a bill of exceptions, or statement on motion for a new trial, or on appeal.

If it be alleged that any mistakes in the transcription now exist, as the same is on file, such mistakes may be corrected by reference to the original notes of the phonographic reporter and the recollection of the Court. And for the purpose of preparing, serving and filing any paper wherein it might otherwise be necessary to insert the said transcription in long hand, or any part thereof, it shall be sufficient to refer to the same as being the transcription of the evidence on file.

In case an appeal be taken to the Supreme Court, the Clerk of the Superior Court shall, upon application of either party, and upon the proper order of the Court, transmit forthwith to the Clerk's office of the Supreme Court, all said bound volumes, and such addenda as may be annexed thereto, as aforesaid, together with such other papers as may be proper to manifest the appeal therein. Either party may, without notice to the other, move the Supreme Court that

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COMPANY,

Defendant.

Statement of the Case on Motion for a New Trial.

Be it remembered that the above entitled action came on regularly for trial before the above entitled Court, Hon. Jackson Temple, Superior Judge, presiding, at its October session, 1881, to wit: commencing on the 15th day of November, 1881, and thence continuing up to and including the 23d day of January, 1882.

A. L. Hart, Attorney General, George Cadwalader, Isaac S. Belcher, A. L. Rhodes and Richard Bayne appeared as attorneys for the plaintiff, and Jas. K. Byrne, W. C. Belcher, S. M. Wilson, W. T. Wallace, A. B. Dibble and A. P. Catlin, as attorneys for the defendant, and thereupon proceedings were had in said action as follows, to wit:

FIRST.—An order was made by the Court denying the motion of the defendant, filed in this cause on the 17th day of September, 1881, to strike out certain specified parts and portions of the complaint in this action, and thereupon a bill of exceptions to said ruling was settled by the Court and filed in this case.

SECOND.—An order was made by the Court overruling the demurrer of the defendant to the complaint herein, which demurrer was filed in this cause on the 17th day of September, 1881.

THIRD.—Thereupon evidence was introduced, objections and motions made by the attorneys for the respective parties, plaintiff and defendant, and rulings and orders were made by the Court and exceptions taken, as follows:

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In the Superior Court
of the State of California
in and for the City and
County of Sacramento

The People of the State of California vs. The Gold Run Ditch and Manning Company	}	First day Afternoon Session Tuesday November 15 th /88
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Transcript of
Testimony
Vol. 1

Winfield J. Davis
Official Reporter.

782 + 16/11. opening statement

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Opening Statement of Mr. Hart

I suppose, if Your Honor please that it will be sufficient to make a brief statement of the nature of the action and some of the points on which the plaintiff relies. The action is one brought by the People of the State of California against the Gold Run Ditch and Mining Co. The defendant in this case is alleged to be a Corporation and is alleged to be running the business of hydraulic mining in the County of Placer which, I understand, according to the fact and also according to the pleadings in this case, is located some seventy miles, pursuing the course of the river, from the City of Sacramento on a ravine that is known as Cañon Creek. It is alleged in the complaint that the Company owns a large tract of land which is devoted exclusively to hydraulic mining and that the debris coming from the hydraulic mine is deposited on the bank of Cañon Creek which flows into the North Fork of the American

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X

River. The ~~other~~ Counties of Sacramento and other farming lands lying along the banks of the American river, as alleged in the complaint, were in an early day a country that was susceptible of cultivation; it was of course subject occasionally to inundation, but not so much so as at the present time. The American River flows into the Sacramento River its junction being at the City of Sacramento. The allegations in the complaint are that there are also two forks of the American River in addition to the North Fork, that is, the Middle Fork, and the South Fork of the American River; and along these three forks of the river the business of hydraulic mining is extensively pursued. The debris that is taken from these several mines being deposited in or about the ravine that I have already spoken of, is carried by the water and by the rains that fall there down into the North Fork of the American River. Along the course of the American River and through the mountains the fall of the river is very large and as the evidence will establish in this case, the average fall of the river from that place to the City of Sacramento is about forty

feet per mile. At some places through the mountains the river falls at the rate of a thousand feet per mile. There are such things through the mountains there as cataracts and through the mountains where the river has such a tremendous fall, the debris that comes into this ravine and is carried from the ravine into the American River is swept almost clean until it arrives at a point somewhere about the town of Folsom in the County of Sacramento. After arriving at that place it is deposited along the banks along the bed of this river.

We expect to establish in the case that the result of that has been to fill up the Sacramento river, which in 1850 and from that time on until the commencement of hydraulic mining in this State, was a stream of clear water, carrying water that was wholesome for food, for drinking purposes.

and for the ordinary domestic uses, that since this debris has been carried into the stream it has filled up the bed, muddied the water, destroyed it for those purposes, and in addition to that has filled up the bed of that river, opposite the City of Sacramento, which in 1850 and from that time on up was carrying clear water, as I said before, and was 35 feet deep in the summer time along the boundary of the City of Sacramento. We expect to prove that the result of the filling up of that stream has been to increase the amount of inundation to which the land along that stream was subjected. And that in addition to that a great portion of the debris that is carried in the water of the American River, is also carried on further down through the mouth of that river and into the Sacramento, forming sand-bars, and obstructing

the navigation of that river. We expect to show also that in addition to the obstructions to the navigation of the river, the debris itself which is brought here and deposited upon large neighborhoods of lands as alleged in the Complaint and as will be proven in this case contains something which produces a malaria; and is an injury to the public health; and upon establishing these facts, we shall claim that by the obstruction of those streams the inundation of those lands ~~carrying~~ them with debris, with the injury to the public health which is the result of these things, that by those things a public nuisance is created which must be abated.

We expect to prove in addition to this, that the defendants in this case intend and threaten to carry on this business and further obstruct the navigation of the river; and we expect

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an injunction upon these facts being established, preventing the further obstruction or further carrying of this debris down there. And as suggested by my associate Mr. Cadwallader, we expect to prove that the average fill of the Sacramento river below the mouth of the American, is fifteen feet.

Among the smaller facts we expect to prove in establishing these things, will be, for instance that gardens have been covered up homes have been destroyed trees have absolutely been covered. Taking as one instance in the American river, we expect to show, that there a barge was sunk, which was 35 feet below the water; but on the banks of the stream, or on the bed of the stream, which is now 20 feet below the surface of the soil.

The Court — I presume all those things are controverted, are they?
Mr. Hart — A great many of

them are. I understood some of the allegations in this complaint are admitted. For instance I understood that it is admitted that they own this mining land.

It is not denied in the answer it is admitted that they carry on the business of hydraulic mining and deposit their tailings. It is admitted also that those tailings are carried into the American river, but the denials chiefly consist in denials of the obstruction of the navigation of the Sacramento river.

Mr. Byrne. Attorney General Hart, I suppose you say we admit that the tailings are carried into the north fork of the American River.

Mr. Hart. North Fork. Yes Sir.
Mr. Cadwell. There is one matter which will probably have to be disposed of. As your Honor will recollect, the demurrer in this case, as well as the motion to strike out, were disposed of by Judge

Henson. Subsequently he caused to be executed a certificate that he was disqualified to act in the case; and I will suggest to the gentlemen upon the other side that the action of Judge Henson in those particulars stand and be adopted by Judge Temple today.

The Court. Be entered and made as of today?

Mr. Hart. That appears on the records of the Court that Judge Henson sat upon that demurrer and motion to strike out by consent.

Mr. Caldwell. That would leave it, however, in a rather questionable form and that difficulty had better be cleared up.

The Court. Is there any objection to that course on the part of the defense?

Mr. Byrne (After consultation)
It is suggested, if your Honor please that the records

of the Court on the point
under consideration, be read
Not only for the information
of your Honor but that we
may know more accurately
just what was decided

(The clerk reads from the
minutes as indicated)

Mr. Wallace. Now if the
Counsel will be so good as to
state distinctly what they
propose to do now upon
that record.

Mr. Cadwalader, What I
propose is this; to have a
similar order made today
by Judge Temple in this
cause

Mr Wallace. If your Honor please the demurrer was general and the motion to strike out also contained a very material portion. We have no objection to the Course suggested by Counsel provided there is an understanding. Your Honor has never examined it, and really not ruled upon it. It is understood that this pro forma order which it is now agreed Your Honor shall make is not to embarrass Your Honor or us either in the trial of this Case and that the Court will not consider itself, nor ourselves precluded—

The Court (interrupting) Unless it has legally that effect. I suppose it could not in any other way unless I would be legally bound by it.

Mr. Leadwelder. Judge Wallace's suggestion is to have such an order entered but to deprive it of all legal effect. I do not see how that can be done. If Your Honor, of

course overrules the motion to strike out and overrules the demurrer, that of course disposes of those questions during the trial

Mr. Wallace. - We understand it as if Your Honor had really considered this motion and demurrer and ruled upon it but still the matter is entirely in Your Honor's hands, during the trial if you see proper to change your views upon that subject; and it does not foreclose anybody during the trial if the Court should be of the opinion on the trial that another view had better be taken. We merely mention this in order that there may be no misunderstanding and that we may not be told, when we come to argue this case, as we expect to, on the merits, that we are precluded by this order from being heard,

in the same manner that we would be heard if your Honor had ruled yourself.

The Court — Of course if the order is entered, whatever legal effect it has, it must have. I don't so understand the practice though that it has the effect that if the question can be raised otherwise that the Court is precluded from considering it again. I do not so understand the practice.

Mr. Wallace — Your Honor does not understand the Court would be precluded.

The Court. I do not so understand it. I understand this; that the pleadings of course are fixed by the order. That will not be revoked. But I do not so understand the practice that if the same question comes up in a different form that the Court is precluded from considering.

it

Mr. Wallace, I call your Honor's attention to ~~the~~ the circumstances that the motion was denied. The motion was denied by us at all their complaint. Now it was denied in toto except as to the eighth paragraph, which is out, and as I understand is out by consent.

The Court. I do not understand it becomes the law of the case that the Court cannot proceed in the usual way to decide questions as they arise.

Mr. Wallace, With that understanding we have no objection.

Mr. Badger - Allow me to inquire as to the ruling on the demurrer or the ruling on the motion to strike out.

The Court. On either question so far as it can be raised again in another form. So far as it affects the pleadings that of course is final, because

that fixes the issues in the trial

Mr. Leadwala. Then I suppose it will be in order to ask that the same order be entered today as was entered on the 17th of September by Judge Benson.

The Court. Very well, let it be so entered. I suppose you wish your exceptions as to the other order. I do not understand you, gentlemen, as waiving exceptions by saying you have no objections to this course.

Mr. Leadwala. Including the vacation of that order. (To counsel for defendants) There will be no question about that. You will have your bill of exceptions as of this day, anyhow.

Mr. Wilson. The order is now vacated and the Court makes this order to which we except. We have a right of course to make a bill of exceptions.

Mr. Leadwala— And we will

agree that the present bill shall stand as the bill on this order with such changes as shall be necessary.

The court. It can be certified now.

Mr. Byrne. No. it has not been settled. I sent it to Attorney General Hart to examine, and if he had any corrections to it to make there. I understand there are no objections to the bill of exceptions as ^{presented} ~~entered~~ by us.

Mr. Cadwalader - No, no objections.

The court Then you can take it and change the dates and recitals as far as necessary.

Mr. Rhodes. If I understand the purport of this properly, if your Honor will permit me to see if we do understand each other, this prior order which was made by the judge of this court passing upon the ~~demurrer~~ and upon the motion to strike out and

permitting plaintiff to succeed is all set aside, and the demurrer and these motions are again submitted to your Honor for decision and thereupon your Honor makes a decision which is similar in purport to the decision already entered here, and to that the other party except

The Court. Yes. The Clerk suggests that you submit a draft of the order you wish and it can be shown to the other side. Will one of you kindly draw the order for the Clerk. You will then be sure to get what you want.

Mr. Hart. I suppose the order to be entered by the clerk in this case will be similar to the one already made.

The Court. There is some question about having the old order vacated. If you will state exactly what you want the Clerk will enter it and then there will be no question about it.

Testimony

of

J. W. Hoag

called for the plaintiffs Sworn
Mr. HartQ - Mr Hoag where do you
resideA - I reside in Washington, Yolo
County

Q - How long have you resided there

A - Since about February 1850

Q - By what means of transportation
did you come or where you brought
her?A - I came by the way
of the Lathrop by a vessel on both
sidesQ - In what part of California did
you arrive when you came here
originallyA - I arrived
in San Francisco, and then came
to Sacramento

Q - How did you come to Sacramento

A - On a Schooner

Q - You say you settled in Washington
this, immediatelyA - I then went to the mines on
the American River on the 3^d
of July 1849, I settled in

Washington in 1850

Q- What time did you come to California
A- I think it was the last day of June I arrived in San Francisco

Q- 1849?

A- Yes

Q- How long did you remain in the mines after you arrived there

A- It was either about the 1st of October or 1st of November. I am not certain which I came down from the mines

Q- November 1849 - A- Yes I think it was November

Q- Where is Washington located with reference to the City of Sacramento

A- It is directly opposite Sacramento on the Sacramento river

Q- Was there any town there at that time

A- There was no town; there was a town being projected at the time I went across the river and took up my residence there

There was about three houses probably

Q- Where was the City of Sacramento located then and what part of it was constructed

A- It was located, the present city, on the present site of the City of Sacramento

Q- About how many streets of the City had been built up

A- When I first came here

Q- Yes sir A- There were some buildings on Front street I think however when I

first arrived, the streets running at right angles with the river, had not been laid out, that is, had not been cleared up.

I only remained in the City, that is, at this location, from the 2nd of July to the 3rd - only one night

Q- From the 2nd of July 1850!

A- 1849, when I first came here

Q- When you came back had any more of the town been constructed?

A- Oh yes; Then J street was running up

some distance with cloth houses
and a few wooden houses on
each side of it, perhaps up
to 3rd or 4th street and K
street was up about the
same distance

Q- Did I understand you
to say that you have resided
in Washington ever since 1850?

A- Ever since 1850 in the
same locality

Q- Continuously? A- Continuously

Q- When you came here in
1850 do you remember the con-
dition of the Sacramento and Russian
Rivers? A- I do

Q- Look at this map and see
if you can recognize it and
what it is, a map of?

(Showing map to witness)

A- That is a map of the
Sacramento

Q- State whether or not that
map of the Sacramento represents
Sacramento and the rivers at
they now are, or as they
were at the time that
you first saw them

A. - The City of Sacramento is located just ~~at~~ it is here on the map at the present time, and that was the original location as I understand it. This lake in here (Referring to map) did at that time run down to the river as it does here on this map but it is closed up here now at this present time. There is no outlet to this lake ~~to~~ the Sacramento at the present time. It has been closed up. That was originally the condition.

2- Show about the river American and the Sacramento river at their junction?

A- This was the original junction of the American river with the Sacramento, however now, the American empties into the Sacramento up about opposite this point here (Pointing on map).

2- Show far north of where it originally was?

A- I should judge about half a mile north, maybe not so far as that

Mr. Wilson - Mr. Attorney General, will you give us the date of that map, please?

Mr. Hunt - March, 1880

The Witness - This American river now runs pretty near straight into the Sacramento

Q- The curve in the river near its mouth has been cut off? A- It has been cut off.

Q- Do you remember when the curve in the river was cut off. Mr. Hoag?

A- I cannot fix the date, but my recollection would place it about ten years since I recollect one thing in connection with it, that Judge Swift was Mayor of the City at the time, or in the City Board of Trustees at the time

Q- As I understood

you, instead of making the curve at or near its junction with the Sacramento River. ~~It~~ it goes straight into the river opposite the town of Washington

Q - Nearly straight into the river, opposite a point ^{above} ~~above~~ the town of Washington?

Q - How far above?

A - Probably above the north street of the town of Washington perhaps eight hundred feet. The town of Washington does not extend up so far as the mouth of the Sacramento

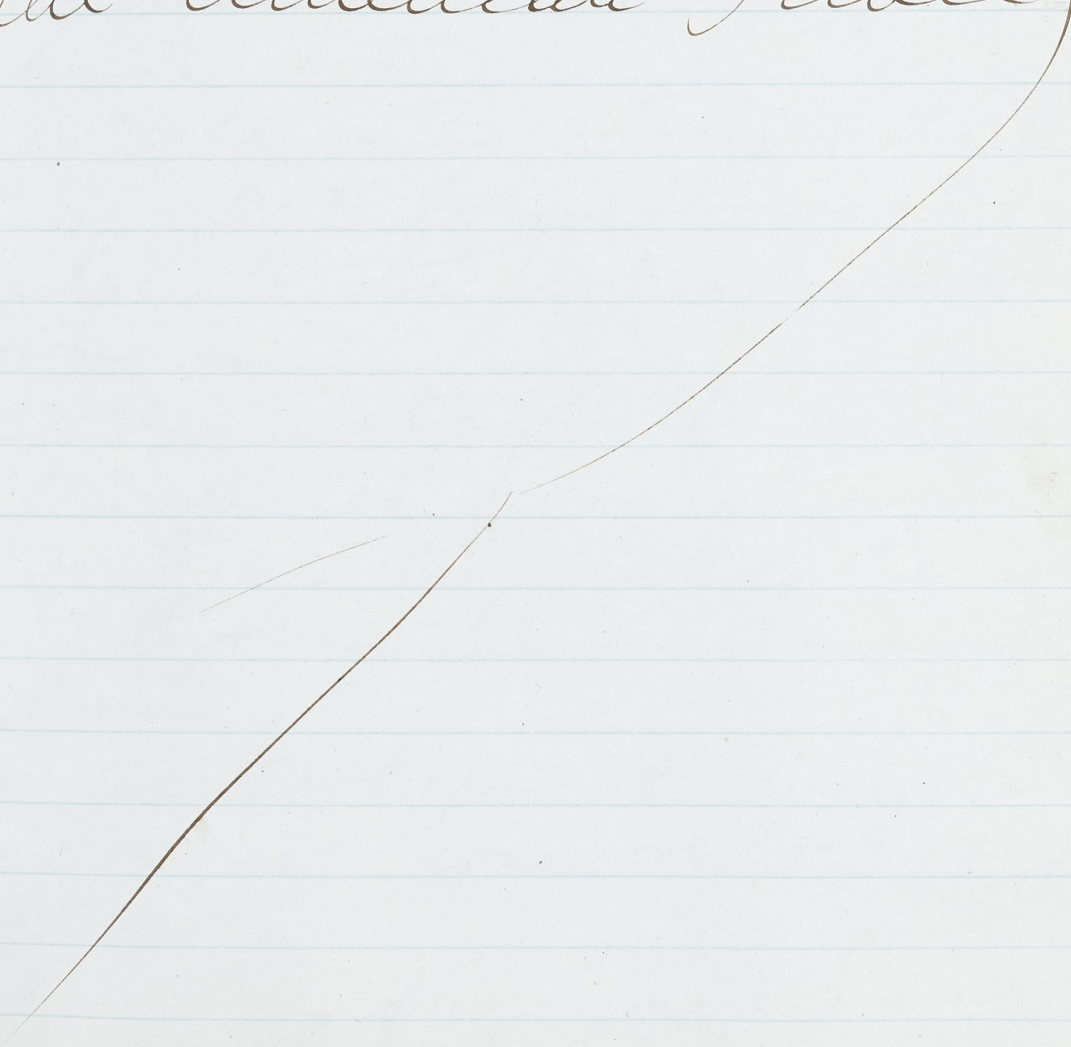
Q - During your earlier acquaintance with the American river, did you ever have occasion to go up it?

A - I have

Q - State the circumstances

A - In the year 1852 on the 2nd day of November there was a fire which burned this city of Sacramento nearly up and are the

next day a heavy rain
commenced and rained
continuously until the
rivers were high and the
American river then flowed
over the country back
of the City here so that
boats could not come
into the City; and I
transported goods from
Panama to the front
of the City to a little
town called Keaboken on
the American river.



2- How did you transport those goods

A- In a boat which I was then running as a ferry boat between Sacramento and Washington

2- What kind of a boat was that
A- It was a scow boat, a flat boat with side wheels

2- A steamer?

A- Yes, it would carry about twenty five tons

2- What little town was it that you carried goods to

A- It was called Hoboken

2- How far was that from Sacramento

A- Well on a straight line it is about from three to four miles to the point where that town is

2- On a straight line it is four miles from where

A- From the point of the city

2- From the Sacramento River

A- Yes. Perhaps it may be more, it was right at J. Street

2- How far by the river

A- At that time it must have

been some, six to eight miles ²⁷
by the ~~curve~~ of the river as it
then ran. Perhaps not
~~over~~ six.

2 - Did you have occasion
during that time also to ex-
amine or notice the American
River during the summer time

a - very little

2 - What was the character
of the water then coming
down the American
River

a - The water was
clear. I will name a cir-
cumstance which will
show what the water
was in the fall
of 1850; soon after I
came down from the mines

I purchased a scow for
the purpose of making a
ferry boat of it that I laid
at the mouth of the old
American River or
rather at the old mouth
of the American river,
and I recollect distinctly
while I was negotiating

for this reason of noticing
how clear the river was
and how deep it was right
at the old mouth of the
American River on this
side of the river

Mr. Catwalader. Mr. Hoag,
one moment, I want to interrupt
you. just fix the mouth
of the ^{American} river with reference
to what are called
the old gas works, or with
reference to the Rail-
road Bridge?

A- It was about a
block and a half above
the railroad bridge. I
should judge by meas-
urement about six hun-
dred feet. It was
just at the north end
of the present ware-
house of the Pioneer
Mills. At this point this
scow that I was
negotiating for was upon
the water and I recollect
going on board a number
of days in succession

I became acquainted with the parties and we observed how clear that water was. We could see the bottom of the river and I judge it not to have been at that time less than thirty feet. That was my opinion at the time, I recollect it distinctly.

2- Didnt you mention a ~~barge~~ barge that had been sunk there or some kind of a boat or craft

A- Not at the mouth of the river

2- When was that

A- A few years later there was a grist mill and flouring mill located perhaps four or five hundred feet up the river

farther, pretty nearly North of the present round house of the Rail road company, and steamers and large vessels used to

take flour up. They were then grinding old flour over and sweetening it up. Flour that had been bought from New York would land at the mill.

2- That was a long way far up the river did you say.

a- I think it was perhaps eight hundred feet above the point that I located as where the scow lay or above the present ~~where~~ warehouse of the Pioneer Mills.

2- About how far was that from the mouth of the river.

a- About eight hundred feet.

2- From the mouth of the American River perhaps.

2- From where it entered into the Sacramento.

A - Aye. There was finally a vessel sunk there opposite the mill and I think probably it lays there yet. I don't remember the name of the vessel.

Q - Did you ever notice that in the water after it sunk?

A - Not particularly I did not

Q - You don't know whether you could see it

A - I don't think I ever went up to look at it

Q - About how deep was the water up there at the place you speak of

A - Well I could not fix that; I could not say

Q - Did you ever make any estimate

A - I know this was

a large vessel
 Q- What time of the
 year did it go up
 there
 A - I think it
 went up in the
 fall and was sunk
 upon the rising of the
 water in some
 way

Q- Did it go there before
 or after the rains
 had come, the show-
 ers?

A- That I can not determine
 certainly but I think it
 went there before the
 rains had raised the
 water

Q- That was the fall
 of 1852 I think you said
 A - I did not fix the
 time, it was a few years
 after.

Q. A few years after you came here?

A. Yes a few years. I think it was perhaps 1852. Judge Wilson was the owner of the Mill. He was a well known citizen here.

Q. How did the water come here as you went up the stream, when you were running your ferry boat, with the clearness of the water which you have described down about the mouth?

A. It was like water in high water coming down from an ordinary country. It was somewhat more muddy than in an early season, in the fall but it was not colored as the water is now. It was the washings from an agricultural or rather from an unbroken country.

Q. What was the character of the bed of the river at that time, and the banks?

A. They were lined with trees. The banks of the river were lined with

trees all the way up

2. What Kind of trees?

A. Oaks. Some willows.

In going up, instead of following the current of the stream all the way up, we crossed the country and went through open places wherever we came.

2. How were the banks of the American with reference to being steep and deep?

A. The banks of the American at that time were quite low compared to what they are now and the water flowed in the banks. And wherever it flowed over it flowed through a country wooded with willows and oaks.

2. Were there any settlements along the banks of the stream at that time, any persons living there?

A. Yes there were some parties living on the upper side of the American River

on the north side

2. Where was the mill in reference to the river?

A. On this side

2. And how about its proximity to the banks of the river?

A. It was a bluff bank at the middle

2. I say, how was the mill with reference to its proximity to the banks, its nearness?

A. Oh! It was very near to the banks

2. What kind of a mill was it?

A. It was a flouring mill

2. Run with water?

A. Run with steam

2. Did you ever in those days go further up the stream than you have mentioned here?

A. Not in the American River

2. Did you ever go along up the banks of the river?

A. No, except when I went to the mines, when I first arrived. I crossed at what is called Norris' Ranch in going to the mines.

2. What was the bed of the river at that time where it is now, the American river north of this place where the Cur has been cut off, or east of this place?

A. That is above that place.

2. Yes.

A. Well I can not say distinctly in regard to that, I never travelled up the American River except as I passed up when I first came to the country and then while I was transporting goods up.

2. How about the water of the Sacramento at that time, at and below the place where the American river joins it?

Q. In regard to depth?

2. The depth and clearness.

A. The Sacramento was clear, as clear as the American. At that time there was apparently no difference in the clearness of the water of the Sacramento and American, both were clear.

2. How was it about depth?

A. In the fall of 1850 I changed my ferry landing. I had been running from I Street to a point right opposite, landing at what is called the Olive Branch Hotel now in the town of Washington. I afterward changed the landing to run from I Street to a street directly opposite I Street where my present residence is, and in digging down the bank to make a landing on the opposite side we had occasion to measure the water at that point.

2. On which side?

A. On the opposite side.

2. On the Washington side?

A. On the Washington side.

The water at that point at the bank was twenty feet deep at that time.

2. What time in the year, was that?

A. That was at low water.

2. How high was it at that time from the water to the top of the bank?

A. It was about twenty feet from low water mark to the top of the bluff.

2. How long did you continue to run that ferry boat?

A. I ran that ferry until I think about 1853 or 1854. I am not certain of the year that the bridge was chartered. I ran it up to the time the bridge was chartered. That was it 1853 or 1854 I think.

Mr. Cablin. The bridge was

Chartered in 1857.

A. Well my interest in the ferry ceased but it was run after my interest ceased in the ferry.

Mr. Hart 2. During the time you were running that ferry did you notice any difference in the color of the water from season to season, in the American river say?

A. From one season to another?

2. Yes sir

A. I don't think I did

2. You don't think you did during that time?

A. No, I did not

2. When did you say you sold out your interest in the ferry?

A. I think it was the summer of 1853

2. You are not very clear about that. I will ask

Your one more question to see if you can not remember better. Do you know how long it was before the bridge was chartered that you sold out?

A - I parted with my interest in the ferry not by a direct sale

Q - Well I know, but when did you part with your interest in the ferry with reference to the time of the charter of the bridge?

A - I think perhaps I, in stating 1857, it may have been 1854, but it was not later than that, that I parted with the interest direct in the ferry

My family however some of them retained an ~~interest~~ ^{interest} up to the time that the bridge was chartered &

Q - Did you continue to run on the ferry and?

A - Yes

Q - Cross on the ferry?

A - Yes - I was indirectly interested in

that ferry up to the time the bridge was chartered, but I didn't have a direct legal interest. My family were interested in it.

Q - How far say that from that time on until the date that the bridge was chartered you continued to run ~~the~~ the ferry, somewhat since that time have you been in the habit of crossing the river, noticing it? A - Every day. Q - Every day.

A - Nearly. Q - Have you watched to any extent the changes that have been made in the river by any cause that now suggests itself to you, and if so what changes have you noticed?

A - I have, I have noticed that the water in the river has been growing more muddy, changing its color.

Q - That is the American?

A - Both the American and Sacramento. The American river more than

the Sacramento

Q - When did you first notice that the water in the Sacramento river was changing its color?

A - Well it has been quite gradual, but more rapidly within the last five or six years.

Q - You don't remember when you first noticed it?

A - I couldn't fix the time particularly.

Q - A great many years ago or only a few years ago?

A - Well from six to eight years commenced changing gradually, and has grown - the change has been more rapidly of late years, say three or four years back.

Q - What color has it been changing to? A - It has changed to a reddish mud color.

Q - From clear water?

A - From clear water to a reddish mud color or yellowish muddy color, you might

describe it.

Q - What color has the Sacramento river changed to? A - The water in the Sacramento river as it meets the American river has always been clearer. For instance take water as we use it from the water works in Washington and compare it with the water that comes from the water works in Sacramento at any season of the year, and the Washington water is the clearer. You can see the difference in a tumbler of water poured out at anytime from the two tanks.

Q - That is, taking it on the Sacramento side and on the Washington side?

A - Yes. The water on the Washington side is the clearer of the two.

Q - Clearer than it is on the Sacramento side.

A - Yes.

Q - After the junction of the two rivers?

A - Yes. The water of the Sacramento

and the water of the American do not mix immediately.

As you walk across the bridge at the time of high water, now you will see that the water at the Sacramento side is more muddy than that on the Washington side.

Q - Now is there any rising ~~flushing~~ line between the water on the one side and the water on the other, where you can see a line of difference or distinction, gradually showing itself? A - At times you can see it very distinctly?

Q - A line. A - A line.

Q - About where is that, in the river? A - That is

generally about this side - this end of the draw. The water from this end of the draw this way is much more muddy than as you go towards the opposite side.

Mr. Leadwelder - You mean the draw in the Railroad bridge.

Q - On the Railroad bridge, Yes.

2- Which crosses the Sacramento River?

A- Yes

Mr. Hart - About how near the center is that, the line of distinction, difference there?

A- Well, the centre of the draw is very nearly the centre of the river.

2- So that the line of difference is near the centre of the river is it?

A- It is this side of the centre, about the width of mill, say fifty feet this side of the centre, would be this end of the draw, more than that perhaps.

2- Have you ever noticed as the water goes on down below, whether these two different kinds of water, different colors of water, mix together?

A- They mix together the further they proceed.

2- How far down do you have to go before you lose sight of the line distinguishing the two colors of water?

A- I never noticed that

particularly. I have not travelled on the river but very little since the time that I speak of; the change in the color of the water.

Q - Now, what is the difference in the color between the two kinds of water after the American comes into the Sacramento in the winter time say? A - The water from the American River is of a more reddish cast.

Q - And the other?

A - And the other it is darker mud, but clearer; more the natural color of water.

Q - More bluish? A - Yes more the natural color of water.

Q - Did you ever with a view of experimenting in this matter, any take the two kinds of water and compare them together, in vessels?

A - I don't think I have directly. In drinking water on the two sides of the river

we have always remarked it that the people of Washington, have the advantage of the people of Sacramento

Q- Now can you tell what makes the difference in color? Whether it is the amount of mud and debris or whether it is the color of the mud and debris?

A- Well it is both. There is more mud in that that comes from the American that there is in that which we take up from the opposite side of the Sacramento, and it is of a lighter color

Q- After the change of the current of the river, the mouth the junction between the two rivers, cutting off the curve which was originally near the mouth of the American river did you notice any difference over on the other side?

A- On the opposite side?

Q- Yes Sir. A- Any difference in the color of the water?

2 - That is, any difference from what it had been before, before the change had been made?

A - It is mixed now

2 - What direction does the water take now when it comes into the Sacramento river from the American

A - It runs it starts almost at right angles. That is the mouth of the American is at the present time almost at right angles with the Sacramento river and the water of the American has different effects at different times upon the Sacramento water. For instance when the American river is high, compared to the Sacramento it pushes the muddy water further over, but when the American is falling and the Sacramento is high, as it frequently happens, the American having spent its force, the Sacramento runs down with ~~for~~ more force and volume. Then the water is clear further this way; but when —

the American is higher than the 49
Sacramento, comparatively,
then it pushes the muddy water
over on our side farther

2- Now. I want to ask
you, do you notice any
distinction, different from the
one you have already mentioned
between the water of the American
river where it comes in now
running straight into the Sacramento
river and the Sacramento River
water ^{immediately} above

A There is a material
difference. The water above
the influence of the American
in the Sacramento is much
clearer even than it is on the
opposite side here, after
they have joined. But I have
travelled in a small boat above
my place, which is some four
miles above the Sacramento, ~~but~~ ^{above an}
where the American river is
high the water from the
American runs into the
Sacramento about three miles

by the river up coming over
the banks of the American into
the Sacramento; the water from
the American runs over and
that makes the water of the
Sacramento muddy, all the
way up, as far as they are
mixed. When we get above
there, the Sacramento is still
clear.

Mr. Leachvalader 2- Mr. Hoag
Let us see whether we under-
stand you. The American river
you say at ~~that~~ times, has a
mouth three miles wide?

A- At times, yes. The
same as that. The American
river flows over the banks
of the Sacramento into the
river.

2- For three miles

A- Yes. It is about three miles
up opposite Bryte's place. There
is where it generally ~~separates~~
there being a bend there.

Mr. Hart- Now complete that
answer as you were going to
make it before. A- I will

state that where the American river is high compared to the Sacramento and so high that it is above the banks of the Sacramento it flows over the bank of the Sacramento —

Q — (Int.) Well, I understand that. But you were just completing an answer when Mr. Goodrich spoke to you. Do you remember what you were about to say then? A — Oh, it was in regard to the clearness of the water.

Q — Yes. A — That as the American comes into the Sacramento in that way some three miles wide, its mouth, it muddies the water of the Sacramento the whole distance up. but less and less in proportion to the amount of water that comes from the American.

Q — Now where it comes out at the natural mouth of the stream there, you can find a clear distinguishing line?

A — Very distinctly and you can see it

It ^{marks} ~~makes~~ it as far as the current of the American flows over the water of the Sacramento; it is very muddy; and just above there, only a few rods you will see quite clear water.

Q - Now, have you noticed any difference in the bed of the American River during the time that you have been here?

A - The old American river is completely filled with sediment and sand. From the point where the American was turned to flow into the Sacramento above at its present mouth, some half a mile above the old mouth from that point to the old mouth of the American is full of sediment almost as high as the adjoining land now.

Q - Do you know whether or not that was filled by the water simply the water overflowing? or whether it was filled by persons hauling mud

there? A. Oh, it was filled by the washing of the water.

2. The washing of the water?

A. Altogether. There has been mud drawn out of there a great deal or sediment drawn out to fill up the city.

2. I understand you to say that this curve that has been cut off here has been filled up < showing on map >

A. Yes sir, completely. Mr. Cadwallader The old bed of the river? A. Yes sir. The old bed of the river. < showing on map > From this point to this point is now almost as high the original banks.

Mr. Hart Do you know what the color of the soil is, where it has been filled up?

A. It is a yellowish sediment. We call it stickens.

The present river runs right across into ^{the American?} ~~the~~ ^{Drill} state here in remembering dates by figures I am deficient, I can remember circumstances

but to fix dates I am always
deficient. I can remember
this, that I felt a very
strong interest against
having the water turned
over there, ~~(showing)~~ for
fear it would break through
our town as it did do af-
terwards.

2. About how many years
ago was that? A. Well, I
should say ^{seven-eight} ~~1878~~. It may have
been more; but I remember
this much that Judge Swift-
you can fix that day - was
the principal mover in
changing the bed of American River.
He was at that time in the
Board of Trustees. It was
during his administration. It
was the principal mover in
changing the bed of the river.

2. It was several years ago.

A. Yes sir.

2. And since that time you
say this has all been filled up
~~(showing)~~ A. This has all
been filled up here.

Mr. Hart I got into a

Conversation with the witness there, that I was interested in myself and possibly did not give the Reporter all the information he might want. Now, in speaking of this change in the bed of the American River, about how from the Sacramento River does that change commence, on a direct line, change in the bed of the river?

A. Well, I am not as competent to fix that line as others who have been and examined the whole question.

Q. Well, what would be your estimate of it? A. My judgment would be somewhat less than a mile.

Q. Less than a mile?

A. Across here < showing >

Q. That is, from the point where the change commences directly to the Sacramento River?

A. Yes.

Q. Through the new channel.

A. Yes sir.

Mr. Catlin. Q. Any more speaking

of the color of the water?

Mr. Hart No, I am speaking of the change in the channel of the river - the American river (to the witness). How far would it be from the point where the change ⁱⁿ ~~in~~ the bed of the American River commences, following the old bed of the river to the Sacramento River?

A. Well, if I am right in the estimate of this distance here (showing) -

Q. (Intg.) If you are right in the estimate of the cut across?

A. Yes. Then this would be very nearly three times -

Q. Then following the line of the river would be nearly three times? A. Yes Sir

Q. Which would be three miles?

A. Yes Sir, that may be an over estimate

Q. Now, you see that portion (showing on the map)

A. I have estimated it too large, then. I am not acquainted

with this country here. I simply know that from a point there that the water was turned into the Sacramento. I have never been to that point to examine it.

2. Now, the portion of the river which you say has been entirely filled up, then of the old river bed, is from the place where the straight cut was made into the Sacramento River?

A. From that point following the old bed of the river into the Sacramento is filled up.

2. Entirely? A. Very nearly.

2. And you say it is filled up with shingles? A. Yes sir.

2. Red dirt and sand?

A. Sand sediment.

2. How does the sediment that fills the old bed of the river there compare with the surrounding country in the character and quality of the soil?

A. The original soil.

2. Yes sir. A. The original soil.

was black of the banks of the rivers here of both the American and the Sacramento, a dark, adobe, soil comparatively. It was somewhat clay mixed with loam, and the present bed of the American river as filled up up there is a light, shiny much. When wet it is slippery and when dry it cracks uneven.

Q. How deep? A. How deep, the cracks? Well, I have seen cracks as far as I could see down. I never have measured them, but I have no doubt they go down about eight or ten feet, from the appearance of them, and would measure six inches across.

Q. Is that a peculiarity of any kind of soil, that you know of? A. All of our adobe soils cracks from a wet to a dry season but they don't form so large cracks. They crack smaller.

Q. Now, I mean this particular kind of cracks that you speak of

Are they peculiar to any kind of soil, that you know of?

A - No - ordinary soils. It is to this sediment, or slickens.

Q - That comes down the river?

A - Yes. peculiar to that.

Q - Now, you say that the old bed and banks of the river was not composed of the kind of soil that now fills the bed of the river, but of a black soil

A - It was dark, rich loamy soil

Q - How did the banks of the river in that respect compare with the lands in the surrounding country?

A - Very similar

Q - Leaving out of view now the change we have already spoken of, that is the change in the channel of the river so as to make a cut across-cut off the head, have you noticed any other change in the bed of the American river

either as ~~the~~ to depth, soil, or
otherwise? A- In the
bed of the river?

2- Yes, and along the
bed of the river?

A- Nothing, only its filling
up, and with this peculiar
soil

2- Well it is filling up
when did you first
notice that it commenced filling
up

A- Well I should fix the
date some from six to ten
years

2- Ago

A- Yes

2- With what kind
of soil is the river bed
filling up?

A- With this sediment

2- This sediment that you
have just described

A- And some sand. The
predominating soil is a
clayey sediment

2- About how deep if
you know has the bed
of the river filled up
with that sediment

A- How much?

2- How deep, yes, how
much.

A- Well where I fix the
depth of the river at thirty
feet at the mouth of the
American River at

low water now there must be some four or five feet of sediment above the water, low water in the Sacramento, there must be some four or five feet of this sediment that is now above low water

2 That is it would be thirty five feet deep

A- Yes

2- According to your estimate Now getting out of that mouth of the river where you have examined this matter - and going above where the change in the direction of the river, was made do you know anything about any filling up there?

A- As far as I see passing up and down the Sacramento it has filled up

2- How far up can you see

A- Well nearly half a mile

2- How has it filled up - what way
 A- With this same sediment.

Mr. Hart {to associate counsel}
 He says as far as he can see up the American River from the Sacramento river, a half a mile it is filled up.

{To the witness} That is what you said isn't it.
 A- Yes sir.

Mr. Cadwalader 2- Standing on the Yolo shore and looking up the mouth of the American

A- Looking up from the Sacramento as I pass up and down the Sacramento looking up the American the American is filled up very nearly to its banks with this sediment, to its original banks.

Mr. Catlin 2- The old bed you are speaking of
 A- Yes the old bed.

Mr. Hart 2- No, the new bed you are speaking of

A - No, I am not speaking of the new bed.

Q - You are speaking of the old bed ~~that~~ above the place where the change commenced?

A - No the old bed from where it originally emptied into the Sacramento

Q - You said that was filled up

A - Yes

Q - I ask you now whether or not at a point above that above where the change in the direction of the river was made, you know where the American river bed had been filled up

A - I am not conversant with that from observation, only by general report.

Q - State whether or not you noticed ~~and~~ any of this sand and sediment elsewhere than in the bed of the river there.

A- It covers the soil between the two rivers

2- To any considerable depth

A- Considerable depth

2- About what

A- The soil has been raised between the two rivers and on this side of the American River above here, considerable

2- About how much

A- Well I would not fix that. I am not sufficiently acquainted with that country only from representatives of people that live there as I have con-

versed with them with regard to their crops and so forth

2- You have seen the sand bars and sed-
iment but don't know the depth

A- I don't know the depth. I passed over what is called the American river bridge, and from the levee to the

American River bridge, I have always noticed or have for a number of years back a large deposit of the same character generally that I speak of is in the middle of the river. But as to its depth I could not say.

2- I state whether ^{or not} you have noticed any change in the bed of the Sacramento River

A Between this and Washington, or above and below?

2- Below. I will say now, below the junction of the two rivers

Mr. Cathwalader 2- New mouth of the American

A Yes. The Sacramento River at the time that I speak of as having some a ferry and changing the landings was deep across between the whole distance was deep water between Washington and Sacramento

2 I want to ask you before

you go any farther in that question though: Did you ever know of any ships coming up the river there?

A - Any ships? Oh yes

2 - When

A - In 1849 '50, '51 large vessels moved at the banks of the Sacramento River

2 - What kind of ships were those

A - They were barks and largest sized sea-going vessels

2 - One more question on that: have you ever seen any of those ships up since 1834 come up the river

A - I couldn't fix the date at which they ceased coming. It may have been considerably later, but large vessels were here in 1849 to '50 and '51

Mn Cathwalade 2 - Ocean rig?

A - Yes. Ocean rigged vessels, drawing eight or

nine ten feet of water.

Mr Hart 2-How you have fixed the depth of the Sacramento River at Washington or on the Washington side where your new landing was made at twenty feet of water in the summer time with twenty feet banks above the water making forty feet in all of the banks at about forty feet.

2-What was the depth of the river opposite that on the Sacramento side

A-I think it was not quite as deep, at that time, the water then flowed against the bank at Washington and made a very abrupt bank. I think the water on this side was perhaps not as deep, but there was not much difference there was not much difference in the water from one bank to the other at that time

2. What was the character of the bottom of the river?

A. I never examined particularly the bottom of the river as to its character. It went on of the soil of the two sides

2. Dark colored?

A. Yes sir, comparatively

2. Do you know what the depth of the river was near its center?

A. I never measured it but from observation — my recollection is that there was very little difference in the depth of the river as I run my ferry boat across from one side to the other, the whole distance, but my observation was that the bank on the opposite side was more abrupt than on this side, showing a wash of the current on that side of the river, Channel

2. That is a wash of the American River too?

A. How?

Q. The current came.

A. Yes, the effect of the American River running in right angles here near by ~~(indicating)~~ made a deeper Channel somewhat on the other side, but not a great deal of difference.

Q. How was the river, was it straight or crooked?

A. How?

Q. Was the river straight or crooked at that time here?

A. The American?

Q. No, the Sacramento

A. The Sacramento was just very little — the same — not the same as now, because on the opposite side at the low water, there is a large bank of sediment right where my landing was when I spoke of it as having built it; there is a sediment bank there extending out —

Mr. Catlin (interrupting)

well, the question was whether the river runs straight there.

Mr. Hart He says it is not as straight now, because of this thing.

A. Directly opposite to my house, that is, directly in front of my house where my ferry landing was at that time there is now a bank of sediment extending this way, at least I think, a hundred feet, that is now out of water from where the original bank was

2. Now, Can you, from your measurement of the water at the time that you mentioned and the sand bars and sediment that you speak of, Can you tell how much sediment has been deposited in the river at the place where your second landing was?

A. Right at the bank there must be from thirty five to ——— well about thirty five feet

2. That is, it raises the bed of the river thirty five feet there?

A. Yes, very nearly or quite thirty-five feet.

Mr. Cadwallader 2. That is the foot of J street is it? opposite the foot of J. street?

Mr. Catlin. A bar on the opposite side of the street, he is speaking of

A. There is no bluff bank there now at all.

Mr. Cadwallader 2. That is opposite the foot of J street is it, Mr Hoag?

A. That is opposite the foot of J. street

Mr Hart 2. Have you examined along the banks of the Sacramento river on the other side, to see whether or not that filling up with sediment is continuous?

A. It is not continuous. It continues where the river changes its course, so as to throw the current on this

side the river. Then on the opposite side you will find this filling up. Then again when the river changes back so as to flow against the Yolo bank, there is a bank on this side all the way down.

Q- So that the beds of the river have been filled up on each side, either side alternately as the current changes.

A- As the current changes, the channel being on the other side, that is on the Yolo side, the bank is on the Sacramento side.

Q- The sediment?

A- Yes, the sediment. Now the American river coming in so far from the city as it does above meets the Yolo side and bounds back to this side opposite my place.

2- How long is this bar that you spoke of first, this bank of ^{sediment}

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A. How long is it up
and down?

2. Messin

A. It runs from the
bridge down about two
blocks, it is now out
of water

2. How wide is it?

A. Well, I think it will
average one hundred feet
and perhaps more from the
original bank into the river.

2. How wide is the
river at that place?

A. Now?

2. Yes, well how wide
were the original banks of
the river at that place?

A. I can't name it in
feet

2. Well, what is your
estimate?

A. It must be about
a thousand feet or more

2. A thousand feet?

A. Yes

2. How far, how high is it
now from the top of this
sediment where this bank is

to the top of the original 75
bank of the river?

A. From the present
low water mark?

2. No, from the top of
the sediment there?

A. Oh! Well, as I said
before, we have built levees
there

2. Well, we don't want
to know any thing about
the levees, we want to
know the original banks

A. Well, in building the
levees, we have destroyed
that original bank, that
is, we cannot locate
it.

2. You can find pretty
near it, can't you?

A. Yes

2. With reference to the
adjoining land?

A. Oh, from the edge
of the water now to
that original bank?

2. No, from the top of
this bank of sediment?

A. Oh, uh?

~~sediment?~~

Q- Up to the top of the original bank

A- Perpendicularly?

Q- Yes

A- Well there is very little from four to five or six feet

Q- Then the river at that place has been filled up so as to make the difference between forty and six feet there?

A- Yes sir;

Q- In the height of the banks

A- Yes

Q- Four; five or six?

A- Yes, it depends on the location. As I said before we can hardly fix a point where the original bank was in height

Q- How far up and down the river have you noticed these changes in the bed

A- Well there is change all the way from here to Freemont; the river has filled up more or less from here to Feather River, the Sacramento

~~Have you ever gone up~~

Q- Have you ever gone up the Sacramento River above the Arnot late years. Oh, up the Sacramento

Q- You say you have never gone up the Sacramento river above Freemont

A- Yes.

2- Did you notice the character of the water up there

A- Clear.

2- Now running down the river, running down the Sacramento River, below where the American puts in how far have you gone and note the banks of sediment?

A- I think it is about three years since I have gone down the river in any vessel or boat.

Q- How far have you gone down recently say

A- I have been down about two miles, travelling along the the bank of the river, on the Yolo side within the last month

Q- During the last seven or

eight years have you been down there frequently

A Yes sir.

Q Have you noticed any changes in the bed of the river down that way?

A I have

Q What are they?

A The same as here filling up.

Q To any very considerable extent

A Quite noticeable

Q How

A Quite noticeably, filled up very much.

Q ~~I~~ I will ask you now whether or not in the summer time, the vessels that you saw come up this river in 1857 could come up it now?

A Oh no. It requires a steamboat built as shallow as they can make it run now almost to carry freight to get up the river

Q What effect did the filling up of this river have upon inundations, overflows

A - Make the water flow deeper over the country

Q - You have noticed that from experience have you

A - Yes sir.

Q - Were there any levees along the banks of the Sacramento at Washington in 1851 and '2 and '3 and '4?

A - No sir

Q - None at all?

A - No.

Q - Are there any levees there now.

A - There are.

Q - How large?

A - Well the levees must be now from eight - to nine feet above the original bank, the original soil. I know where we have been rebuilding levees this season, the contracts have almost uniformly been to build nine feet above the natural soil

Q - Are they sufficient to keep the water in this river at this time in the winter time?

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4. They were not last ~~year~~ ^{winter}.
The water ran over the levees
nearly all the way from here
to Freemont.

Q- During ordinary high water
A- Well there was rather more
than ordinary last ~~year~~ ^{winter}
was. The same thing occurred
however ~~two~~ years ago last
winter just about the same. The
water ran over levees that were
seven, eight feet above the
natural soil two years ago.

2- When did they first com-
mence constructing levees then
for the purpose of carrying the
water ~~way~~ ^{way} at Washington and
along both sides of the Sacramento
river.

A- The general system of levees
the Sacramento river as I am
deficient in dates it was
under the swamp Land act, the
original swamp Land act.

2- That was in
1868

A- Yes

2- Well had they not
constructed levees prior to that time

As those were only private enterprises

Q- Well were any constructed in fact, that is what I am getting at

A- Oh yes, we had small levees. One neighbor would have it say a foot and perhaps another one have two feet high, and some may be as high as three feet, but not more than that. I think up to the time of this 1868

Q- During the first year that you were there did you notice whether or not the Sacramento river carried all of its water without overflowing at Washington say?

A- No, in the winter of 1851 and 2 the water flowed right through the town.

Q- Well that was a very heavy flood, wasn't it?

A- That was as high I think as we have ever had

Q - Well I say during ordinary times?

A - Ordinary seasons there was very little overflow

Q - The river carried all of its water there?

A - Carried very nearly all of its water

Q - You say after that time they constructed small levees?

A - Yes sir.

Q - Some a foot and some more than a foot high?

A - Some - increasing them each year, in order to protect their possessions

Q - You say they increase them each year. Did you notice any connection between the increase in the levees and the filling up of the bed of the river any coincidence about that?

A - Since the river has commenced filling up the system of leveeing has been more perfect and we have made a business of leveeing; before that time our levees were thrown up just simply

with a shovel mostly,
but now we go to work
and build a strong wall.
As the rule we adopt
sixty feet base.

Q That does not
answer the question, but I will
ask you this question, You say
when you first came here the
river had capacity sufficient
to carry its water during
ordinary seasons; afterwards
it became necessary to
construct levees 2 foot high

A- Yes

2- Each year you had to in-
crease till they are nine
feet in height

A- Yes.

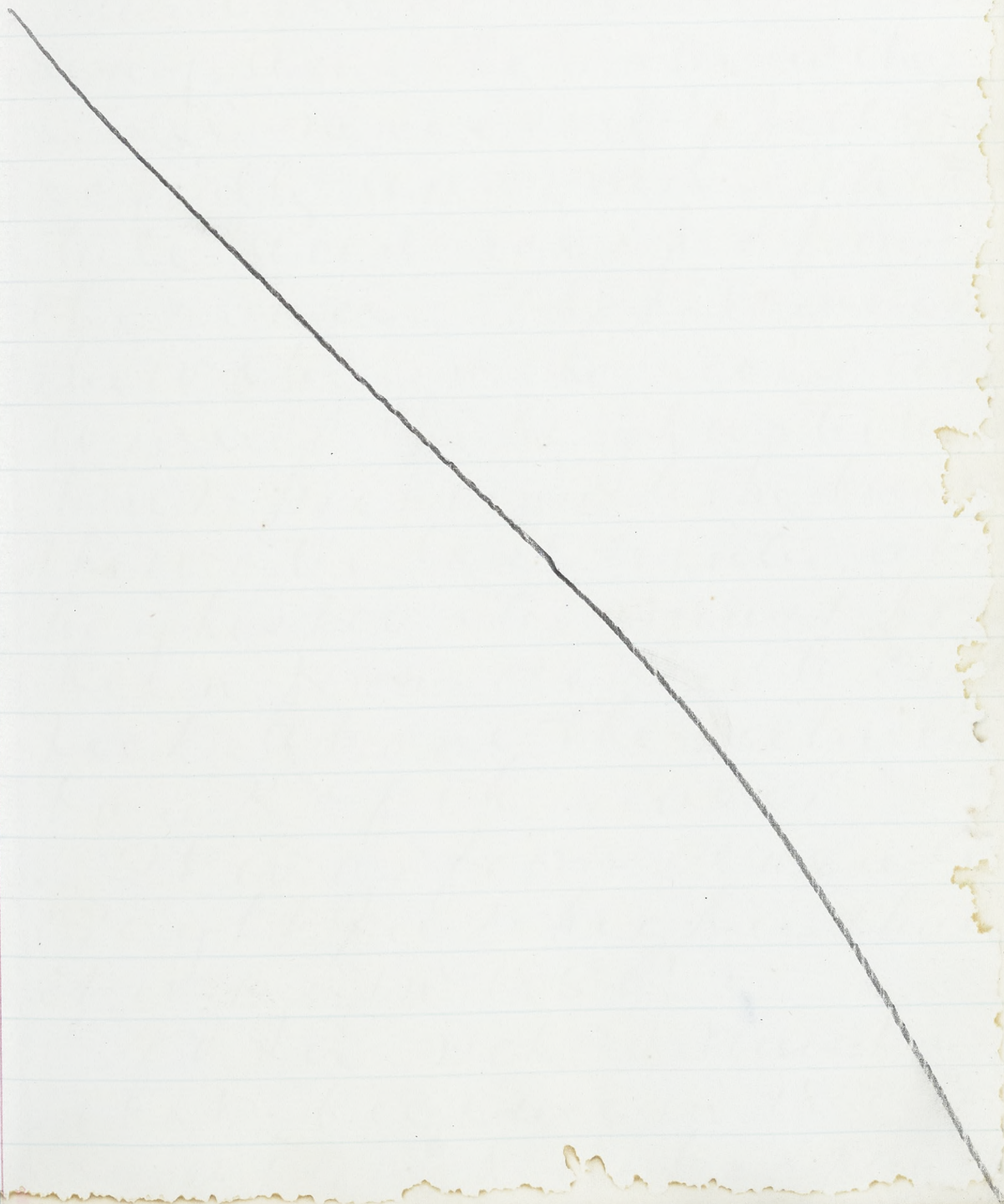
2- During an ordinary season
at this time, during ordinary
high water would the natural
banks of the river as they were
in 1830 and '51 hold the water

A- No sir the water now

with a comparatively small rise goes above the original bank of the river.

2. Do you know what the difference is between high water mark now and high water mark in 1850?

a. I cannot fix it
Certain



Q You cannot estimate the difference then?

A. Well it depends on circumstances, I will illustrate it in this way. When the water had arisen in the Sacramento to very nearly the top of the levees on the Yolo side there were quite a large number of breaks occurring and the water in the river necessarily fell quite rapidly and ran out to the tule and escaped from the river. That lowered the water in the river and lowered the high water mark. But previous to the breaks the water last winter, at its highest water must have been from seven to eight feet above the natural bank of the river.

Q. It was from seven to eight feet higher than it was in 1850?

A. No Sir. not so much as that, because in 1850 it overflowed the bank with

very high water, or in 1851-2
it overflowed the bank two
or three feet.

Q. You mean 1852?

A. The winter of 1851-2 & two 2
1852-3.

Q. The extreme high water you
fix is in November 1852

A. Yes.

Q. Or the winter of 1852-3?

A. Yes. That would it. And
between that high water
and the high water of last
winter you want to know.

Q. Yes, the difference in height.

A. I think it must have been
at least four feet, from
four to five feet, while the
water was within the bank
of the river, that is, inside
of the levees, or mean.

Q. You were speaking a
moment ago of extreme
high water. You speak
of ordinary high water.
Mark. Now then you want
to know how much higher
at this time the water is
at ordinary high water now

than it was in 1850, at ordinary high water mark. How much higher you must build up your levee in order to keep the water out at ordinary high water mark than was required in 1850, when the natural banks held the water at ordinary high water mark?

A. Well I would say from four to six feet.

Q. From four to six feet difference in height?

A. Yes.

Q. Mr. Cotton makes a remark to me that you did not say so. Did you reply that the natural banks held the water at ordinary high water mark? of 1850.

A. That depends upon the construction you put to "ordinary high water". I am speaking of the average water in the winter season.

Q. That is what I am speaking of. — The high water that come

During the average seasons
 A. It was in extreme high water that it overflowed the banks to any extent in early days.

Q. During average seasons?

A. The average seasons from 1850 to 1860 - the majority of the seasons the water did not overflow the banks.

Q. And it required no levee to keep it in.

A. No Sir. If it did overflow it was but for a very short time. And the water was
 off.

Q. But the water, I understand - at that time, was clear.

A. Yes.

Q. With your levees, at this time, nine feet high, do you succeed in keeping the water within the banks during the extreme high water?

A. No Sir. Our experience is that when the water gets up to within two feet of our

strongest levees, the weakest
 levee's gateway at the weakest
 points and we never have
 had a season since
 we have adopted this
 general system of
 reclamation that the
 Levee's have not broken
 in a large number of
 places from this point
 to Freeport, and for
 the same distance
 below.

Q. In 1858 when your
 lands were overflowed
 what effect did it have
 upon them?

A. The effect was hardly
 perceptible, that is when
 the water went off, the
 land was left — the
 grass and grain and
 whatever we had on
 the land was left
 clean.

Q. At this time and
 for the last five years
 what is the effect on

the land?

A. The Effect is that it fills most places ~~except~~ where there is a current washing it away. It fills it with ~~sediment~~ ^{sediment} & covers it with sediment.

Q. To what depth does it ordinarily cover the land with sediment?

A. That depends on localities. Wherever there is a current a break. There is no sediment left, but wherever there is an eddy created or a cross current then the water drops ~~sediment~~ ^{sediment}.

Q. Is there a current on the margin of the forming land ordinarily covered by these overflows or is a majority of the land simply covered with standing water with a current in one place only.

A. Well here occurs a
 break in the Levee - a
 break occurs in the Levee
 and the water flows out
 of the break and into
 the Lake. On either side
 of the current the sediment
 continues to increase
 making high banks of
 a slough as it were,
 and as it goes in toward
 the Lake depending on the
 direction the water from
 this break takes it fills
 up. To illustrate: four
 miles above here, for
 three or four years there
 was a break that we
 called the Waldick bog
 because it occurred
 on a place owned by
 a man by the name
 of Waldick. That filled
 up both above and
 below it, so that there
 is a ridge of Tubes just
 back of the cultivated

land, - a ridge of willows
 would say grown now
 as high as the natural
 bank of the river was or
 - ~~was~~ originally.

Q. Forming a basin
 between them?

A. Spreading out either
 way from the beak, but
 then again there is the
 English beak which
 is a mile and a half
 below the Waldick
 beak which is from
 a similar overflow
 and it is spread out
 either way up and
 down. And at the
 outer side of the cul-
 tivatable land is an-
 other sedge and the
 two form.

Q. About what is
 the depth of these ridges
 you speak of, so far as
 the soil and sediment
 is concerned.

A. The one there is from

6 to 10 feet deep.

Q. It is pure sand,

A. Mostly pure sand, between the two and towards the river falls the sediment. It is scarcely slickens like this in the American River but it is between sand and slickens and that deposit is not bad. It is good soil but the sand and the pure slickens is death to all agriculture.

Q. How far down does that ridge run

A. That ridge runs very nearly down to the Railroad as we go out from here to Louisville.

Q. How far back is it from the river generally.

A. It commences from a half to three quarters of a mile and runs.

different places. Different
widths. running back
as far as a mile wide
or in some places

Q. About how long
is that ridge you speak
of?

A. That me formed
by those two breaks
which are a mile a-
part & should be
were about two miles
long.

Q. Going further
South?

A. From the South
End of this ridge,
down further South,
there is another one form-
ed from a break that
occurred below the
gorge in the Mathena
place that runs out
so that the sediment
runs into Washington
Lake - Some two miles
or two and a half miles
from the river - from

Washington, at least, but a mile and a half below from the river break. There was a break occurred a mile and a half below on a place called the Athena place and that formed a similar formation in the Tule. It washed out the original agricultural land and formed a big slough with ridges of sand and sediment on each side in which these willows grow. That thing has occurred on the Yolo side of the Sacramento River from Freemont to the mouth of the river that way, to the slough below the Islands below.

Q. That is from the mouth of the Sacramento below,

A. You have the Sacramento and Steubert Slough, continuous.

Q. How far is that below the Town of Washington.

A. About twenty miles at places along there I say this has burned. Whenever there has been a break there has been a sort of a blow out and billing up.

Q. How is it out back of Mr Hoagland's place?

A. Directly back of Hoagland's place and the town of Washington there is a ridge of sand half a mile wide I should judge running down for a mile or a mile and a half, a mile say from the Hoagland place down.

Q. Well now, where is that Hoagland place?

A. That is right opposite the present mouth of the American river.

Mr Cadwalader, Q. On the Yolo side.

A. Yes, on the Yolo side.

Mr Hart, Q. Mr Hoag has been this land in 1850 and from that time on in reference to being covered with

debris or sediment or sand?

A. Well portions of it was good land and portions of it was deep trules

Q Portions of the land that had been covered with sediment and sand?

A. Yes,

Q When were these lands originally settled? do you know?

A. Well from 1850 to 1854 - from 1850 to 1853,

Q Is that country there divided up into small farms or is it composed of one or two large farms?

A. Well, it is divided up into small farms?

Q Generally cultivated?

A. It was originally

Q About how many farms are there over there if you can make any estimate?

A. That has been covered?

Q Below the mouth of the American River, I am speaking of below?

A. From the American river down

Q Yes, down as far as the slickens run. About how many barns are there south of the American River covered by this stuff you speak of this sediment?

A. Well, it is pretty hard to say. In one place there will be a portion of a barn covered and the adjoining barn, there will be a portion of it covered.

Q, But I refer to where it has injured the land, the soil. I do not speak of covering it entirely.

A. Well, I should say that below the twenty miles down there was between 15 to 20 barns that was very materially injured, very materially injured, some of them ruined.

Q. You say that some of these barns that have been injured and some of them ruined, some at the mouth of the American river were originally cultivated?

A. Yes

Q When? A, Well they are cultivated some now, Hoaglands barn here one is completely abandoned. He has left it. A Mrs Hoagland who originally - two brothers owned two places adjoining. That is as it were, abandoned also. That is just above the John Hoagland place. Then take this Reemes orchard were here the next one below the town of Washington, it is not abandoned but it is filled with sediment from two to six feet deep in places or sand rather. It is complete sand but there are places on the farm upon which there is an orchard which is still good. Consequently he adheres to it and works it but it is very materially damaged.

Q When were these lands cultivated first?

A. Well, they commenced cultivation as early as

I think Hoagland commenced Cultivation in 1851

Q How long was Hoagland's land continuously cultivated?

A. It was cultivated continuously up to within the last three years but for the last ten years it has been decreasing in value. Its cultivation is such that it has been almost worthless to the owner

Q And he has finally, I understood you to say abandoned it?

A. He has finally abandoned it

Q Ceased Cultivating it?

A. He simply depends now upon what willows may grow upon it but what he may get off his place.

Q Now you say these lands were cultivated generally until what time?

A. Well the ceasing of Cultivation has been gradual

but the last ten years. That is since the failure of the general system of leveeing we call it the failure because they continue to break, and the water overtops them since 1860 the decrease of value has been material

Q And the decreased of cultivation? A. And the decrease of cultivation.

Q Were how far back from the river was the land on the other side susceptible of cultivation taking an average, below the City of Washington?

A. Well the average was about a mile but some places, originally the land was not over half a mile wide and then again, it would be a mile wide where it was cultivated and then would come tide

Q What was the character of the soil as being high or low land?

A. We called it swamp land but it was comparatively high land. It was land that we could cultivate and raise a crop on every year.

Mr Cadwalader Q. Land which grew this oak timber?

A. Yes, large oak timber

Mr Stark Q. During ordinary seasons was it subject to serious overblow?

A. It was not subject to overblow so that the land was available for a crop.

Q What was the character of the land as being available for purposes of cultivation?

A. It was very available

Q Now you say since the failure of the levee system they have gradually ceased cultivating. Why?

A. Because of the high water and covering it with sediments

Q Now to about what depth

are these lands now there covered with this sediment?

A. In some places they are covered better deep and some six, and some not over six inches and some less down to an inch. But now then what has reduced those lands more than the covering up with sediment has been the natural rising of the water in the river. It comes up so near the surface, that we can not cultivate early enough in the spring to make our seed grow. For instance take alfalfa seed, which is the seed which makes the land more valuable than any other one seed on the Sacramento River. And after a certain time in the spring we saw that seed and the soil may be in apparently good condition but you can not make it grow because the season is so far advanced that the

sun kills the spout as it comes out of the ground.

Q Why if you know does the water rise so high on the ground?

A. Because the bed of the river is filled up

Q Because the bed of the river has raised the water in the river?

A. Has raised the water in the river: and cellars along the river that originally had no water in them at ordinary seasons are full of water now at comparatively what we call a low state of water

Q Now about the town of Washington how many people live over there?

A. Well I suppose there is about a thousand people perhaps

Q It is a town is it?

A. Yes, a small town

Q Is it a Corporation?

A. No Sir,

there is from 800 to 1000. I should think living in what we call the town of Washington

Q Is it laid out in any way? A. Yes laid out

in streets running parallel with the river and at right angles to the river nearly.

Q What kind of industries are carried on there?

A. There is very little very little done there. The people there depend on their work in Sacramento mostly

Q Are there any stores and hotels?

A. Yes there is three hotels three or four saloons and two stores - small stores.

Q Any orchards and gardens there? A. Yes Sir.

Q Any dwelling houses?

A. Yes Sir yards and orchards

Q How far did you say this town of Washington was below the present mouth of the American River?

A. I think it is from the

north side of the town of Washington as it is laid out in streets, to the present mouth of the American River probably about 800 feet perhaps a little more from 800 to a thousand feet. But the town of Washington is laid out so that there is about 1800 feet included in the plat of the town above the rail road bridge about two blocks I think - yes there is three blocks, 1200 feet.

Q How much of the town of Washington was originally overblown without levees, that is during the early days in California when you first came here.

A. Well at times it was very nearly all

Q. During ordinary seasons?

A. Ah. During ordinary seasons very little of the town plat was overblown in high water as in 1852 and 1853

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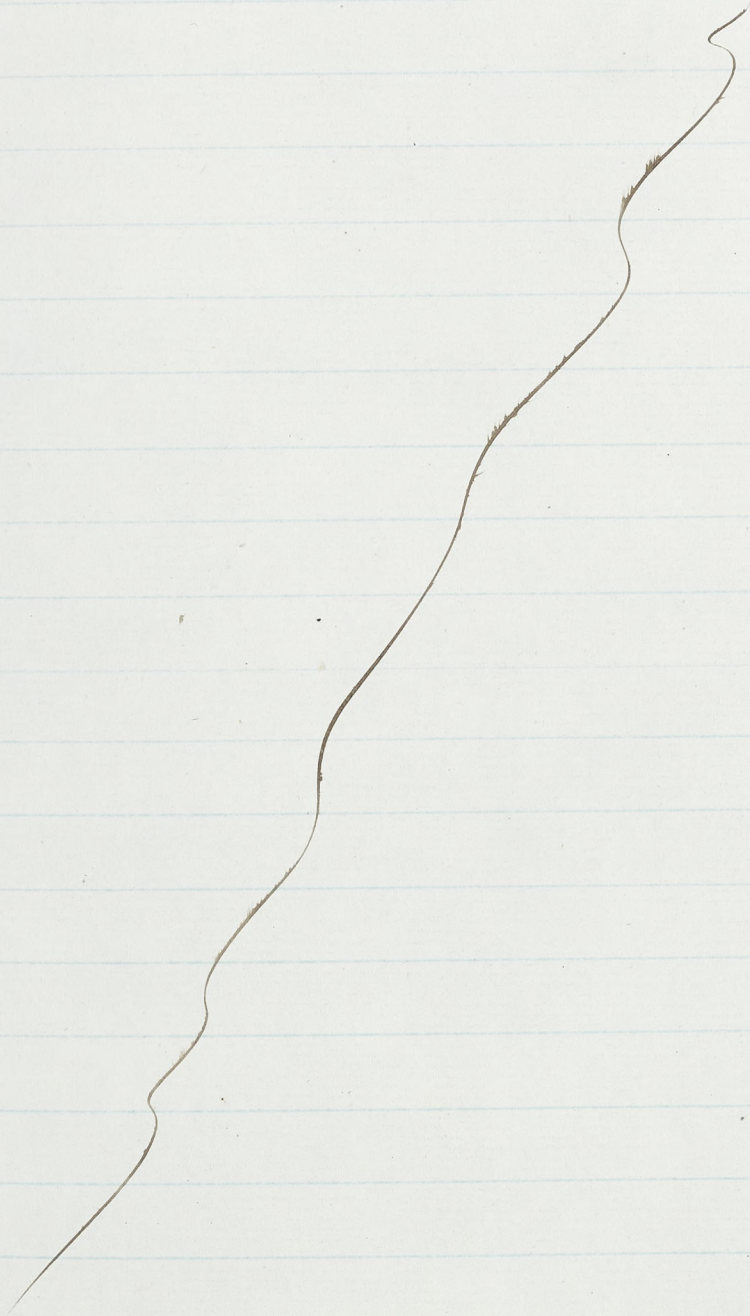
The water run right through
the town. I don't think there
was a spot not scarcely

Q At this time or since
that time has there been any
change in the ^{condition} ~~contradiction~~ of
Washington in reference to
overblow, and if so, how
did it come on?

A. Well the water blows
into the town there now from
a break above the town above
the American River and blows
across, directly across, the
upper half up the town at
about 18 feet rise from
low water mark. It just
blows right across the town
and hills the town right up
hill. Last year the water
came up to the levee on the
land side and every boat
of original sail in the
town I should think and from
2 to 3 feet high

Q What effect has it
had on that town, these
yearly overblows?

A - We consider the town
ruined. The value of real
estate is merely nominal
in the town. We live there
because we have our homes
there but there is no man
in the town that would not
like to get out of it



Q Are the overflows there any worse than they were in early days?

A. Yes Sir We used to consider the natural bank of the town of Washington, the natural bank of the river, on the opposite side was from a foot to a boat and a half higher than on this side.

Q How is that?

A. From the natural bank of the river, the Sacramento, River was from a foot to a boat and a half higher than in Washington than in Sacramento before the buildings of my lease.

Mr Cather Q, you used to consider it so you mean?

A. We considered we were above the town of Sacramento. We located on the higher point decidedly and we had the advantage of the town of Sacramento when we located there.

Mr Hark Q, will have your leasees succeeded in protecting you at all there from these

overflows

A. The levees affect us in this way, the water does not run directly across our property. It does not make a current but backs under. The back water comes into the town.

Q. So that it does run across sometimes? A current does some time run through the town of Washington doesn't it?

A. Last winter it swept the upper half of the town almost clear of houses.

Q. Washed them away?

A. Washed them away.

Q. How high is the levee in front of Washington now?

A. When there is a levee it is from eight to nine feet above the natural bank the natural soil.

Q. Has this water left any deposit now in Washington?

A. In places.

Q. What is the nature of

the deposit there?

A. Well it is mostly sand running through the streets and on certain blocks. There are some lots above the rail road that were filled up by having a picket fence ^{around} them, for instance. It checked the current of the water so as to drop sand upon them and some of the lots filled up from three to four feet last winter; others where the current swept past the surface, so that the surface was washed off and a slough was created through them.

Q. About how many houses were washed out of the town of Washington last winter?

A. Well I don't know how many were washed ^{away} but there was some four or five or six that were all most completely washed away - some of them entirely went out.

Q. washed the house away and left sand?

A. And others were turned around and others were tipped over.

Q. When the sand was deposited did it have any regular depth or different depth in different places?

A. Just depending on the velocity of the eddy, the velocity of the natural current or the eddy. In places in the same lot it would be four feet deep and at the other end of the lot there would be none, but the general effect in the upper end of the town was to destroy it, people who had lots there, numbers of them, have abandoned them.

Q. Now you say in 1853, the water did come over the town of Washington where did it come from at that time?

A. It came from Sacramento

Q. It came right over the bank?

A. Yes, but it did not come with such velocity then as now for the reason that we had no levees and the water just run over the bank say from one to two feet deep and did not run very rapid and consequently it did very little damage, but now when the water runs over the turn of Washington - last winter it run from four to six feet deep right through the turn.

Q. How did last winter compare with the winter of 1853, as a rainy season?

A. The water of last winter and the winter of 1853 the rainfall was very nearly alike.

Q. Very nearly alike?

A. Very nearly alike.

Q. One season was about as wet as another you think?

A. Yes.

Q. You say the water ran
about two feet in the town of
Washington last winter?

A. Yes Sir,

Q. Before that time it
simply came over the bank
some two feet. A. Yes,

Q. Was that two feet regular
or in places only?

A. Originally?

Q. The two feet that you
speak of?

A. Well, it was pretty near in
some cases where the soil
was a little high where there
was no current even scarcely
just raised up, there was
scarcely any current. Then
if there was a depression
the water would run more
rapidly.

Q. Now running out of the
town of Washington along the
rail road, have any deposits
been made out there?

A. Yes Sir,

Q. What has become of the
land that used to be there, if

There was any?

A. There is from a half to three quarters of a mile running back from the town of Washington on the railroad we pass through at present a growth of willows from ten to fifteen or twenty feet high on either side. Originally that same land that is now covered with these willows and sand, was an arm of a tule running up back of the town.

Q. Was there any agricultural land back there originally?

A. Yes, but not this distance back. When beyond there, there is agricultural land through which the rail road now runs beyond this strip. There was an arm of tule running up towards the American river apparently. The arm of tule is completely killed up and there are willows and cotton woods growing upon it. On either side it had

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extended on to good land: for instance up into the town of Washington on to what was originally good land, there is now sand and willows.

Q You said that Mr Staegland's land had now been abandoned, didn't you?

A, It has been abandoned

Q Do you remember when that land was abandoned?

A, He finally moved off of it this last spring and took away his family and abandoned it. He has not resided on it, however, but have a fine yard, to do any successful cultivation. He would go back there in the spring after the water had gone down and lived there perhaps during the summer.

Q, Did he live there in the winter?

A, No sir, he has not lived there since the spring of 1868, the winter of 1868. During the winter season I,

think. He may have lived one winter, but I think not.

Q. What occurred there during the winter of 1867 and 8 if any thing?

A. There was a break in the levee similar to the one that occurred there last winter which turned his house around and freed him. To get off of his house he got on to a tree and stayed there ever night.

Q. He abandoned that place you say practically, some two five years ago? A. Yes Sir,

Q. Is there any portion of his land there that is left for cultivation now?

A. There is no portion of it that will pay a man for attempting to cultivate continuously from season to season.

Q. How large a barn is that?

A. I think he had forty acres.

Q. What kind of sediment covered his land?

A. The prevailing sediment that has been brought upon it has been this white sand sifted completely.

Q. What was the other if any other kind?

A. Some of it is sediment and some of it is white sand.

Q. This sediment is the yellow slickens that you speak of?

A. Yes Sir slickens. A portion of it is that but the prevailing debris that has been brought upon that soil is washed white sand: being so near the break, the sand blows back there the sediment goes farther on and falls at a comparatively greater distance from the break.

Q. Does that cover the whole of his land, this sand and sediment?

A. No Sir, but portions of the land that is not

Covered with that have been washed by the Current so that it is valueless.

Q, What proportion of his land has been covered with this sand and sediment?

A. I should think there was about one third of it covered in that way and the other, nearly all of it, the surface soil has been washed off so deep that it is not worth cultivating.

Q Now what is the depth of the sand and sediment on the one third?

A. Varying from one to four feet, sometimes perhaps more.

Q. Where is his land located with reference to the mouth of the American River?

A. Nearly opposite, just a little below.

Q. Right over on the bank of the Sacramento River?

A. Yes the Yuba bank, the West bank.

Q, Where have been the breaks in the river that have resulted in the overflow of this land?

A, They have been nearly opposite the American River each time.

Q, Nearly opposite

A, Yes.

Q, Below or above?

A, They have run below and above, extending up and down the breaks that is now open, runs down to within about six hundred feet of the rail road bridge and extends to about the middle of the American River perhaps, the mouth of the American River. I should judge that by locating it in that way. But there was a break that occurred in 1868 that run still further up and the State Drainage Commission built a levee over that, leveed it all up last year and only

a part of that levee went away. The upper end of the levee that they built last year did not go away last winter.

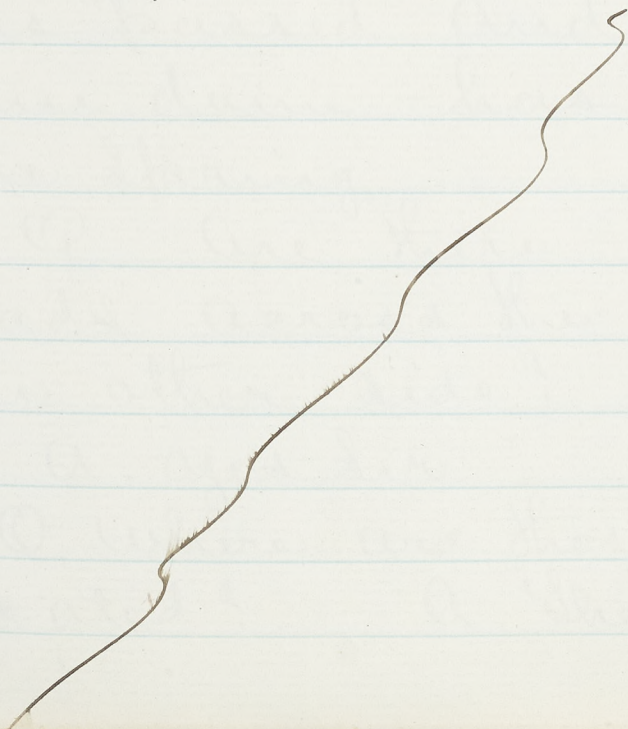
Q. Do you know where the sand and silt that are sand and sediment came from that went over onto Mr. Hoagland's land?

A. Well I never followed it to its source,

Mr Cathie, The question was whether you knew. Just answer that first.

Mr Cadwalader Q, what river did it come out of?

A. It came from the American River.



Q. How do you know that this sand and sediment came from the American River. A. Well, I have stated that the American river water came loaded with sediment. We see that and we know that where that water sweeps over, the sediment is left. Consequently I know it came from that water.

Q. Did you see that water sweep over? A. Yes. We saw that water come down and sweep right across the Sacramento into the country over there and we saw that when that water is sweeping there, eddies creating bars, and we saw the bars left after the water has passed and has gone down - has fallen in the spring.

Q. Are there any public roads across the river on the other side?

A. Yes Sir

Q. Where are those roads located?

A. There is one

leading from the bridge west which is what we call the ~~up~~ river road. It goes west about two miles and then goes and follows the river up.

Q. Going to Woodland or Kings Landing?

A. It is in that direction. Then there is another leading from the bridge down the river, which goes back about three blocks from the river, and then turns down and follows the river down, directly down the river.

Q. How long have these roads been used as public highways?

A. We travelled up and down in 1850, and from that time to this.

Q. During that whole time they have been used as public roads by the travelling public?

A. Yes Sir

Q. State whether or not these overflows extending back for the last eight or ten years have had any effect on these roads which you have mentioned now?

A. yes Sir they have

Q. What has been the effect of the overflows on them?

A. The effect is to interrupt travel.

Q. How?

A. By breaking and washing out the road and overflowing it with water.

Q. Is any considerable length of the road overflowed?

A. Well but the last five years we have had but one winter that we could travel the road from the bridge to four miles above on the river during the whole time and from the rising of the water depending on the time that it rises in the fall, so as to overflow to as late as July. we have had it so that we could not pass up and down the river but four miles even, from Washington up.

Q. Was the whole road but four miles covered, or covered in places?

A. no sin only in places
 For instance, this English break
 has been so that we could
 not travel it but only about
 two seasons out of five.
 One season we had a levee
 across that did not break and
 that was the only season which
 we had been able to travel it.
 We had a bridge two years
 ago, built across the English break
 and the Debris Commission built
 a dam below it, so that we
 could have got across the break
 but we could not get to it.
 This strip of country directly
 back of Washington was over-
 flowed by the break coming in
 from Washington up to the
 American river so that there
 was from about the 20th of
 February last, until the 1st
 of May, we could not travel
 but but two miles on the
 road. It came up to
 within two blocks of the bridge
 and then there was no road
 at all that we could travel

until we got two miles and then there was a road from that point up to the English break, that is three miles and a half that we could have traveled. But there was a break there again this side of what we call the English break that interrupted travel again, and so from Sacramento to Yreka there was at least a dozen of those interruptions by breaks in the levee last winter. The road being destroyed in every case for winter travel,

Q. Well, it is destroyed also for summer travel isn't it? Until it is repaired?

A. Destroyed also for summer travel until repaired, so that we can pass over it.

At 16 feet from low water mark, that is, original low water mark, the water will blow out to intercept travel in the road.

Q. Upon day at 16 feet

above what was the original low water mark, these roads are covered with water?

A. With water flowing out from the river

Q. How was that prior to the time of the building up of the bed of the river? Was that true at that time?

A. No Sir

Q. How high did the river have to get above low water mark?

A. The water had to overflow the natural bank at that time and I think between the present low water and the original low water there is from four to five feet difference

Q. Are there any roads over across the river that are affected by these overflows ^{ways} public overflows, besides the one that you have named?

A. No. I think not, Sir. These are the only two roads that were travelled from Washington except a road that

leads across the tule directly to Garisville and from that on to Woodland.

Q. That is a public road isn't it? A. That is a public road but we seldom have a winter road across there at all, on account of crossing the deep tule.

Q. So that it is not materially affected by the increase in the water?

A. No; there is no material difference in that road from the present and original condition.

Q. Are there any considerable number of orchards on the other side of the river extending south of Washington?

A. There was quite a number of orchards well cultivated and taken care of, and bearing apricots, nectarines, peaches, plums &c, as well as apples and pears.

There is not an orchard now that contains good bearing peach trees of any number from Fremont to Steamboat slough.

Q. Peach trees? A. Peaches, apricots and nectarines.

Q. Or other fruit?

A. Or other stone fruit?

Q. Stone fruit? A. Yes Sir
The water coming so near the surface of the land has destroyed their roots and the orchard except for pears and apples, are almost entirely ruined the whole distance

Q. How far from Fremont to where? A. Fremont to Steamboat Slough, on the Sacramento river

Q. How far is Steamboat Slough below Washington?

A. I think it is 25 miles by the river - from 20 to 25 miles.

Q. I want to ask you Mr Staag, have you any particular occupation that makes it your duty to investigate these matters and if so what is it? A. I have been interested in agriculture since about 1863. In 1863

I became Secretary of the State Agricultural Society and was continuously Secretary for eight years: during all that time I was necessarily interested in looking into all these agricultural questions. Since 1873 I have part of the time been also Secretary of the State Agricultural Society, and have all the time been Agricultural editor of the Sacramento Record Union and have been writing upon agricultural subjects. I have also been a farmer for the last ten years, carrying on farming in my own interest and ownership.

Q. You said during the first part of your examination Mr. Hoag, that large sailing vessels came up the Sacramento River in 1853 and '54?

A. Yes Sir.

Mr. Catlin. He said 1851.

Mr. Harb. What time was it?

A. From 1851 up to 1853 or 1854

I think,

Q. That is what I understood you to say. A. Or from 1850 up to 1853 or '54: I think that was the best at any rate, whatever my statement was: that was my understanding.

Q. You said also that those vessels could not come up the river now as they did then? A. No Sir

Q. Why did they cease coming up the river in 1853 or 1854?

If you know? A. Well I think it was not from the blocking up of the river at that time, but steamboats were substituted in their places. Originally there was no steamboats on the river - in 1850. There were some built in 1850, some small boats; and then some came in, in 1850 and 1851, but from the time that steamboats began to ply on the river and were built here or shipped here, the necessity for large vessels

ceased to a certain extent

Q. Can you approximate the time when the bed of the river became so filled as that in the summer time at low water, vessels could not come up the river, large sailing vessels, such as you have described?

A. Well, I should say growing worse and worse for the last six or eight years.

Q. Prior to that time you think they could have come up?

A. I think they could.

Q. That is all.

A. I wanted to make a correction as to the fall of the water. My recollection of the fall of water at Sacramento in 1852 and '53 was 35 or 36 inches. Last winter it was 25 or 26 inches instead of 35 or 36 as I stated. There was quite a difference in the fall.

Mr. Catlin Q. Fall of what?

A. of water at Sacramento

Q. Between what years?

A. Between 1852 and '53 which was our highest and least winter.

The Cause - What was the difference between low water mark in 1850 and the present?

A. Between low water mark

Q. Yes. A. From 4 to 5 feet, I think.

Q. Higher now than then?

A. Yes. I would state that while running a berry boat in the summer season in 1850 and 1851, in starting my berry boat and running directly across the river, the tide would float it up. When the tide was coming in it would actually float it up with quite a force, and that tide was then from 20 inches to two feet right here opposite the city. I think there is scarcely a perceptible tide now or check of current. I noticed that in starting out with a load. We took

across a great many cattle
 We would start out with a load
 of cattle from this side and
 aim directly at our land-
 ing on the opposite side
 and we would float up
 from 10 to 15 feet if we
 did not steer our boats
 downwards.

The Capt. Q., What sort of
 a boat had you then?

A. We had a flat boat

Q. Run with a cable?

A. No, steam. It would
 carry about 25 tons and
 had side wheels. When loaded
 it would draw 2 feet of
 water.

Mr. Harb., You were speaking
 of tides: How far up did the
 tide ebb and flow?

A. At that time?

Q. Yes Sir. A. Well my
 observation was more partic-
 ularly right here. But from
 general information I know
 that it flowed even to the
 mouth of the Feather River

Q, How far is that from the mouth of the Feather river?

A, It is about 20 miles. By the river it is at least 20 miles.

Q, Did the tide ebb and flow in the American river also?

A, Yes Sir

Q, To what extent?

A, Well at the mouth of the American River just the same as in the Sacramento from 20 inches to two feet at the mouth of the American river, but how much it fell at any distance up, I am not able to state.

Q You said that you ran up the American river. There is one question I want to ask you about that. Was there ever a regular steamer running up that river to Hoboken? A, Not to my knowledge. I think there was not. There was another steamer run up there at the same time that I did, but

we both discontinued with the falling of the water

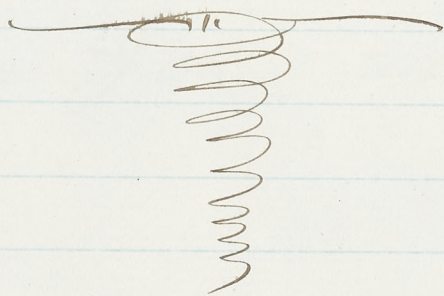
Q. How did they get their goods and merchandise at Hoboken?

A. At the high water with steamers. But when the high water went down, the merchants returned back to Sacramento and there was no Hoboken left.

Q. That was a winter town then?

A. That was a winter town.

Here the Court adjourned until tomorrow morning at 9³⁰ o'clock



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In the Superior Court
of the State of California
in and for the County of
Sacramento

The People of the State of California vs. The Good Run Ditch and Mining Company	}	Second day Wednesday November 16/81 Morning Session
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Transcript of Testimony
Volume II

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Winfield J. Davis
Official Reporter

The People of the State of California	}	Second day
vs		Wednesday
The Gold Run Ditch and Mining Company		Nov 16. 1881

Cross Examination
of
J. N. Hoag

Mr. Catlin Q. Mr Hoag you stated yesterday that your memory in regard to dates was very deficient, but very good in regard to circumstances

A Yes sir

Q You stated that immediately after the great fire on the 2^d day of November 1852 it commenced to rain heavily and continued to do so until the flood came? A Yes.

Q Is it not a fact that after that fire that there was fine open weather for a period of three or four weeks during which time the city

was rebuilt so that it was as much of a city city as it was before, and that then in December the floods came and overflowed the city about the neighborhood of, between Christmas and January of the year 1852? It was after that the people moved up to Hoboken.

A That was in January about Hoboken

Q Yes. You were in Hoboken in January

A Yes. You have examined the records as to water.

Q What say?

A You have examined the records as to water

Q No I have not, I merely am remembering a familiar portion of this city.

A Well my memory arises in this way -

Q (Intg) Well I am asking you if that is not a fact

A All right

Q That immediately after the fire there was fine open weather free from any rain for a period of between three and four weeks, during which time the city was almost entirely rebuilt, that then after that the floods came which covered the city with water, and then they moved from necessity up to Hoboken a place they called Hoboken in the month of January 1853 and remained there until the waters had receded from the city so that they could come back

A. Well which is your question

Q I asked you whether it was not a fact that immediately after the big fire of 1852 November 2^d 1852

there wasn't clear and open weather here for a period of between three and four weeks and that during that time the city was rebuilt?

A My recollection regarding the time immediately following the fire is this, and it rises from these —

Q (Interrupting) Just answer my question, and explain and modify afterwards.

A. Oh, I think there was not a continuous good weather for three or four weeks.

Q You think it commenced raining the next day as you have stated in your direct examination?

A It did rain the next day.

Q And rained continuously until it produced a flood?

A. When I say continuously I do not mean that it rained all the time, but that it was a continued rainy season and that there was no long cessation of rain.

Q I understood you to state on your direct examination that these large vessels were in the habit of Trafficking

between San Francisco and Sacramento up to 1854, and I is that correct? a Yes

Q. And you were asked why they discontinued that business and you said they didn't discontinue it by reason of any difficulties of navigation but because they were supplanted by steamers?

A Not so much at that time

Q. That was before the days of the steamers

A Yes

Q. (Interrupting) That I understood to be your statement

A Yes

Q. Now let me ask you when did the Senator, the old Senator, first come on the river, carrying freight and passengers between here and San Francisco

A It was either 1850 or 1851 and I will not be positive, that is my recollection

Q When did the New World come on, about the same time?

A My impression is that it was a year later or six months to a year later

Q Well wasn't the Senator and the New World running on this river regularly during the greater part of the year 1850

A The Senator and New World

Q Yes

A During the greater part of the winter 1850

Q I mean during the summer of 1850 wasn't the Senator running the whole summer of 1850

A Well I am not positive

Q Wasn't the Wilson's

Hunt and the Confidence running at the same time 1850 and 51

A They were running at an early date but I cannot fix those dates, as I stated without referring to records

Q. Wasnt the Antelope and the running at the same time, 1851 and 2 and all along long before 1854

A. Yes I think they were

Q. Then you are mistaken yesterday when you said this was before the days of steamboating on the river?

A. No I am not mistaken in regard to that

Q. Wasnt the year 1850 a year when steamboating was carried on by steamers like the A Senator and New World?

A. Were they not on the river in 1850

Q. Were they not making regular business trips every day?

A. I think they were.

Q. Between here and San Francisco, during the whole of the year 1850

A. Well I am not certain in regard to that, but I will qualify my statement in this

way: that vessels were consigned to Sacramento and came up to here originally; they ceased that when the necessity for coming up the river by vessels ceased.

Q Did they cease because some of them couldn't get back?
A Down the river!

Q Yes.
A Vessels?

Q Yes.
A No I think not.

Q Do you know, can you say whether that was the cause or not?

A No. I will not say that was the cause.

Q You were never engaged in that traffic at all were you?

A I was engaged on the river and frequently towed vessels up the river with my boat.

Q What boat?

A Steamer.

Q What Steamer?

126 A The Beta the ferry boat.

Q When

A During 1850 and 51 during the latter part, the winter of 1850 and 51

a about what rate of tonnage were those large vessels you have spoken of?

A I don't know what the tonnage was, I am not posted in regard to tonnage of vessels

Q Would they range from 100 to 150 or 200 tons?

a They were vessels, that came around the Horn, freighted with goods for San Francisco and Sacramento

Q Didnt vessels come around the Horn freighted with goods for San Francisco between 100 and 150 tons?

a Do they not?

Q Did they not in those days?

a I cannot state in regard to the tonnage of vessels

Q Can you state that there was a single vessel here that

would rate 300 tons, that would come up here?

A- I will not state in regard to the tonnage of my vessel

Q- You say you have been a practical agriculturist for ten years past?

A- Yes Sir

Q- And carrying on a farm?

A- Yes Sir

Q- Where

A- In Yolo County on the Sacramento River about four miles above Sacramento

Q- How much land have you been cultivating during the last ten years?

A- I have 250 acres there

Q- You have been cultivating it?

A- I have cultivated about a hundred.

Q- Did you obtain this land from the State as swamp land?

A- No Sir. I obtained it second hand of another party

2- Did your grantor obtain it from the State as swamp land?

A- It was rated Swamp land. It was purchased from the State as swamp land originally.

2- Were all the lands along the river there purchased of the State as swamp land?

A- Yes Sir

2- And these lands you have been speaking of?

A- Yes Sir

2- Did you ever take up any swamp land yourself?

A- No Sir

2- You know as a matter of fact that in taking up Swamp land, the applicant has to swear it is wet and unfit for cultivation Mr. Heart. That is a matter of law.

Mr. Battie 2- Well, you first after these farmers over there took up this Swamp land, commenced as I

understood you first, a system of leveeing on your own account, private leveeing?

A - That was commenced in this way; when the water came up and was about to come over the bank -

Q - (Int'g) I am just getting at the fact, I want to trace the thing up. They first commenced leveeing on their own account?

A - Yes.

Q - Under no particular law?

A - Yes, under no particular law.

Q - Then in 1868 the State passed a general law providing for the reclamation of swamp land? A - Yes.

Q - Then these proprietors proceeded under that law to levee and reclaim their lands, did they not?

A - Yes.

Q - Well the levee on the Sacramento river is a portion of those reclamation plans, is

it not?

A - Yes Sir

Q - Now I want you to state how the natural banks of the river were in a natural state before there were any improvements, say as they were as you found them in 1849, with regard to the lands west of them, sloping back on the west side of the river, were they higher or lower, the lands on the immediate bank?

A - As the land goes back on the river it recedes or falls to the tule.

Q - That is the general character of the banks of the Sacramento river all the way from Fremont down to ~~Fremont~~ ^{Steamboat} slough, is it not?

A - Yes Sir

Q - That on the immediate banks of the river it will be a little higher, and it slopes with a uniform slope back till it gets into the tules?

A - Very uniform. Some exceptional places.

Q - Yes. There are exceptional little spurs now and then?

A - Yes Sir

Q - Now how far is it generally before this sloping back brings you into the tule as it originally was in 1849?

A - Before you get to the tule?

Q - Yes Sir, before this sloping back brings you right to that tule as it was.

A - I think the average of the Sacramento river from Freiwort down would be about a mile.

Q - A mile in width?

A - Nearly a mile in width.

Q - You stated yesterday it was about a half a mile?

A - I said some places half a mile, and some over a mile.

Q - Now isn't it a fact,

that in many places; it is not over 500 feet?

A - How is that?

Q - Is it that width in many places as narrow as from three to five hundred feet, that width of ground that is out of the tule itself?

A - There is one place on the Sacramento river, about four miles this side of Fremont where it is supposed by many that the Leache Creek originally emptied into the Sacramento, and there it is as narrow perhaps as you speak of, but no other place.

Q - Is it not so in the Lisbon Swamp land district below the City on the other side of the river?

A - That Lisbon Swamp land district is the one that Mr. Gwin is at work at?

Q - Yes. Does not the

bed come up within 500 feet of the banks of the river?

A - I don't think it does any place. It may one place or more, but very seldom.

Q - Do you know enough about it to undertake to say now practically how that is? How do you estimate in your mind that there is an average -

A (Intg) Well now I have never measured nor I never have walked back from the river on all these places, but in riding along the bank, observing the cultivated land, I make up my mind from that. I never have measured any of them except my own.

Q - Is there a single place - describe a single place in which it is a mile, there is a mile of that in width?

A- I think it will very nearly average a mile taking from Sacramento.

2. (Int?) Name one place where there is a mile.

A- One place?

2- Yes, outside of these little spurs that run out like Mike Brytes' ranch out here. That runs out perhaps a mile, but outside of those places?

A- I will name places that are more than a mile so as to be sure. From my place up about two miles it is comparatively narrow; then from there on for four or six miles, I think it is over a mile all the way.

2- How narrow is it from your place, right opposite the city here?

A- I am not speaking of my place here I am speaking of my ranch my farm

2- Oh, I thought you spoke of your place here, Well I will ask you, after crossing the river here, going right through the little town of Washington, how soon is it before you came to where the trees originally grew, where they were growing in 1849 to '50?

A- That is not a half a mile, but beyond that-

2- (Duty) Well was it a quarter of a mile?

A- Yes.

2- Was it more than a quarter of a mile?

A- Yes, but let me state that there was a small narrow neck of tide running in there, and the beyond that was a mile further.

2- I am not talking about beyond that. I am asking you how near the trees came right up here to the bank of the American river on the other

side opposite this City, whether they come up to the Sacramento River, did they come up to within a quarter of a mile of the bank.

A - No, I think not, Sir

Q - Isnt there a considerable portion of that ~~now~~ that was growing in the holes that has been covered with sediment?

A - Yes Sir

Q - Now growing with willows?

A - Yes Sir

Q - Is that the distance to the holes is much further now than it formerly was?

A - Yes, but wherever there has been sediment, covered in that way, as a general thing there are spots of tule left.

Q - Now what is the width of the strip of tule land between here and going right west, across the Sacramento river till you come to high

land again?

A- What is the width of that strip of tule land?

Q- Yes

A- Originally?

Q- Well, originally, yes?

A- Well it is about a half a mile

Q- A half a mile?

A- Yes. The original width of that tule land was about a half a mile. As it ran out toward the Sacramento river, running almost parallel with the river it grew narrower as it went up. The lower part was over a half a mile and the upper end was less.

Q- Is it there one strip of battle works across that little now that on the railroad it is a half a mile of itself?

A- Now?

Q- Is it there one strip of battle work across that tule that is nearly a half a

mile or quite a mile more in length?

A- Yes, but it runs onto land that was not title land.

Q- Did it the title land extend way beyond Swingers ranch at an early day?

A- Oh, are you speaking of the main title?

Q- Why, yes I am.

A- I am speaking of this little arm of title that runs back of Washington.

Q- Then there is a little arm of title right back here that you call a half a mile or a mile?

A- Yes.

Q- Now then what is the length of the title land right through that country?

A- Well, that I should judge across there was about five miles.

Q- That is what I was talking about. Now the slope—

from the bank of the river to the centre of that tule is uniform and gradual is it not?

A. Yes it is gradual, but it is not uniform.

Q. Very near uniform?

A. Very near.

Q. Now isn't the surface of the ground in that tule about as low as the bottom of the Sacramento River?

A. I suppose it is now but the bottom of the Sacramento as it originally was it is not as low.

Q. Well it is within four or five feet of it then?

A. Yes, may be

A. It is generally considered that the river bed here runs on about the same level that the ordinary depth of the tule is say between here and Davisville?

A. Well that is a question of measurement I am not

able to state whether it is
that or —

Q. (Intg) I am asking
for your judgment and will
take it for what it is
worth?

A. Well my judgment
would be that the Sacramento
bed was deeper than the
tule, lower.

Q. A little deeper; the
bottom of the river was a
little deeper than the bottom
of the tule?

A. Yes it was deeper

Q. Four or five feet
deeper? Six feet deeper?

A. In places it was
more and in places less
varying according to the depth
of the river and the depth
of the tule.

Mr Hart. What time are
you speaking of Mr Cutler?
The early day or the present
time?

Mr Cutler Both he says
he considers that the tule is

now about the same depth as the river is now, but that at an early day the river was a little deeper from four to five or six feet.

The Witness. Well, I did not say so. I said it was deeper; you said four or five feet.

Mr. Bathin. Well you said yesterday that the river was filled up on an average four to five or six feet?

A. Yes.

Q. Very well, then it would be about that difference.

A. No. I state that I have not measured it, and I could not swear as to which was the deepest, but my opinion is that the river was considerably the deepest, that is what I stated.

Q. Well how much the deepest according to your opinion?

A. Well I wouldn't give an opinion because I have not measured it.

Q. Did you ever measure the ~~deepest~~ depth of the Sacramento ^{River}?

A. Yes Sir

Q. Where? A. Right here opposite the City

Q. The time you had your ferry there? A. Yes Sir.

Q. You measured there where you were excavating to make a road out for your ferry, up the Bank? What occasion had you for measuring the depth? Just describe how you measured it and at what point you measured it?

A. I measured it directly opposite J. street.

Q. Well how did you measure it? A. With a pole.

Q. With a pole?

A. Yes, and with a line

Q. Run a pole down out

of a boat. Now was it
 there a flood in the winter of 1849
 and '50 which brought the
 water over this City during the
 winter of 1849-50? A - Yes Sir

Q - Didn't that flood fill
 up all that lake country on
 the other side? A - No Sir
 Oh, with water?

Q - Yes A - Yes Sir

Q - Of course. I am speaking
 of water, now. There was no
 slickens, as you call them, in
 1849? A - No; there was
 none in 1849

Q - Made a lake of water there
 six or seven miles wide,
 didn't it? A - Yes Sir

Q - Even wider in places?

A - Yes, I presume so.

Q - Well didn't it go in 1850-
 '51 - the winter of 1850-51
 overflow this City and over-
 flow those lands?

A - 1850 and '51 I think was
 a dry season

Q - Well I am inquiring a
 little for my ^{own} information

If it was a dry season that is not an answer to my question. A - No, My recollection is that we did not have an overflow that year.

2 - Then you had a very heavy overflow in 1852 - 3?

A - Yes

2 - That is the time when you ran a little steamer of 25 tons burden, from here up to Hoboken? A - Yes Sir

2 - Didnt Jerome Davis at the same time run a steamer right over all these lands over here to the west of the City, that you have just spoken of?

A - Yes. I will not swear that he did at that time But he has done it.

2 - Well, wasnt it done during that flood of 1851 -

A - I think it was. I think it was

2 - Well where was the other time that he has done it?

A - In 1861 and '2

2 - So at the period of those large floods navigation with small steamers was a pretty easy matter in almost any direction from this City except directly to the East here over these high lands!

A - How is that?

2 - I say during these high floods, what we would call a wet winter when we have what is called high water, above the average it is very easy for a small steamer to go over the bars in that direction (Pointing to the west) and go here towards Nickbarr, and over these lands on the east side of the Sacramento River and even up the Sacramento River and in the rear of this city!

A - I don't remember any having gone on the East side of the Sacramento River in the basin over here (showing) though I think

they could do it, They have done it over the Yolo side.

2- When the American River is high!

Mr. Badger, That is in the basin. You mean in the basin.

A- Yes Sir, in the basin They get into that basin away down below.

Mr. Patton When the American river was high in those days, it flowed over the bottom lands on the north side of the American here, and went into the Sacramento River with a mouth three miles wide didn't it?

A- Yes

2- You said the American River had a mouth three miles wide?

A- I mean

by that —

2- That

it overflows the bottom lands to that extent?

A- That

is it; that it overflows the bottom lands, and overflows the bank of the Sacramento into the

Sacramento when it is higher
than the Sacramento

Q - That is what it did
in 1852; the big floods of
1852: we usually speak of
that were followed by the
big fire in this city!

A - Yes

Q - The time you went up to Hoboken

A - Yes Sir

Q - Now there was a very
large flood in December 1862
and another one in January
1863, was there not?

Mr. W. B. Betcher, December 1861

A - 1861 and '62; one the 9th
day of December and the
other about the 9th of January

Mr. Catlin - Q - Well did that
entirely overflow the town
of Washington? A - Yes Sir

Q - There was not a dry
spot in there, was there?

A - I don't think there was.

Q - Except a little levee
along the bank of the river
about wide enough for a
man to walk on?

A - Yes

2 - That was about the condition?

A - Yes

2 - And it was a continuous sheet of water from there westward towards Davisville of ten miles wide, was it?

A - Yes. I presume it was ten miles wide towards Davisville; away out towards Swingle's.

2 - Did it parties pass over there in steamers - stern wheel steamers, quite large size?

A - That is the time I stated Jerome Davis did run a steamer.

2 - That is the time you stated?

A - Yes Sir

2 - Well, how far did he sail towards the west?

A - Well I never went out on the steamer.

2 - Well, about? A - I think about where the Tule House used to be; landed about there. That is about from five to six miles out.

2- Do you know as a matter of fact that he didn't go considerably further than that?

A- I don't know as a matter of fact. I think that was one of his landings and perhaps the principal one. By going down, however lower, so as to come in lower down, he could go further out below the Sink of Putah.

2- Well, this was in the days when the river was perfectly clear, as I understand it?

A- Yes Sir

2- No muddy water, as I understand you, here?

A- Yes Sir

2- Now, didn't the big flood of December 1861, two floods December 1861 and January '62 discharge a large amount of debris and sand at the mouth of the American river and into the river, and in this vicinity?

A- Of debris?

2- Yes?

A- Not a large

amount. I didn't notice ¹⁷⁰ it there.

Q- If there was any you didn't see it? A- If there was any I didn't see it at that time, except where there was a break in the levee. Then of course there was some discharge from the break itself. But there was no general discharge of debris at that time.

Q- There were quite considerable levees at that time were there not? A- 1861 and '2.

Q- Yes? A- They were not large.

Q- Well, they were levees?

A- Yes. That was after the Swamp Land Act, was it not?

Q- No. That was before the Swamp Land Act?

A- It was before? They were small.

Q- The Swamp Land Act of 1868 you speak of?

A- Yes. There was no general reclamation up to that time.

Q - You say you saw no sand deposits except where the levees were broken?

A - Well, sometimes the water. There were sloughs - natural sloughs that had existed for a number of years. And there was one just below Washington. There is one down there now. I don't know when it was made but it runs back into the lake. Sometimes the water used to run from the river into the lake, through it, and then back.

Q - You have got a little off, the subject. You have stated you did observe some places where there were sandy deposits caused by the breaking of levees. What were those levees?

A - I was just going to explain that in that slough it had been filled up and that winter - it had been filled up. I think, by Mr Reed - that winter it was

broken out and there was some wash. There was some wash from sand banks that were in front and between the slough and the river. But there was no general discharge of debris at that time.

Q- Some wash from sand banks on the margin of the river? A- No Sir

Q- Sand banks where?

A- There is a system of sloughs running from about opposite—

Q (Intg) These sand banks you speak of. Where were they?

A- I am going to explain to you. There was a system of sloughs running nearly parallel to the river on the opposite side from down about Lewis and up to about opposite M Street; those were existing there when I first came to the country, and it was light sandy soil, different from the ordinary soil of the banks, and through those

and through this slough 173
there was a break or a
wash at that time

2 - In many places the
banks of the river there was
formed of lighter sandy soil?

A - No Sir, I say at that
place

2 - Well, at that place?
A - Yes

2 - You say there was a
system of those places!

A - Well, that is only about
a quarter of a mile along
up and down the river. I
think there are three sloughs
running parallel with the river,
as though some action of
the American river - they
had been formed there and
there was large oaks growing
on them even. But they were
different from the ordinary
bank of the river.

2 - Are you acquainted
with Pultah Creek and Cuckoo Creek?

A - Somewhat, I never have
lived on either of them.

2- Do they discharge their ¹⁷⁴
waters in this belt strip of
land? A- Yes

2- The waters of the
Putah Creek; about how
far from Washington do
they discharge into the trees?

A- Well, about 12 miles, I
judge, on Pulah Creek, 12 to
14 miles

2- Haven't you got that a
little high? How far is it
to Davisville? A- We call
it 12 miles to Davisville

2- Well, don't they discharge
considerably this side of
Davisville, as it was at an
early day, I am speaking of?

A- Well, it is south. It
is a little nearer. It is
south.

2- In times of wet winters
Putah Creek discharges a very
large body of water, doesn't it?

A- Yes

2- Nearly as much as the
American River, or quite?

A- Ah, no. It is a large

body of water, but nothing like the American river

2- That all goes into this tule? A- No?

2- Doesnt that contribute to raising the water?

A- Certainly

2- Over these lands?

A- Certainly

2- So the water saves these lands in floods by coming in from the Sacramento river and also from Putah Creek?

A- Yes Sir

2- Well, how far north of the line, say a west line of where the Putah comes in how far north is it where Backe Creek comes in, also into the tules? It is about the width of a strip of country between those two creeks?

A- I think it is 16 miles

2- Now, that discharges into this same tule between here and Knights Landing, doesnt it?

A- Yes. Between Woodland

and Knight's Landing.

Q- Where does Cache Creek rise?

A- In the Coast Range - Clear Lake

Q- Clear Lake? A- It runs from Clear Lake

Q- It has sundry tributaries and then discharges as it comes down into Yolo County, and discharges into the tubes?

A- Yes Sir

Q- That water contributes to make the water high over these swamp lands, does it not?

A- Yes

Q- Now ordinarily, in a season when the water begins to rise in the tube, where does it generally first come from?

A- Well, that depends upon the location of the rain.

Q- My question embraces that. Where does it generally?

A- I think it generally comes from the Creeks first?

Q- That is from Butte and Cache?

A- Yes Sir

Q- Does it next begin to

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come in from the Sacramento
river in the neighborhood of
Knights Landing, or between
~~here~~ and Knights Landing?

A. Yes Sir.

Q. Comes in there? A. It comes
from wherever there is a break
that is the depot, in the bank
of the river and in the
levee that is the depot; there
it commences to run in first.

Q. Where are those places
between here and Knights Landing?
How far above the City?

A. There is a break here;
the English break: for years
it run in there before any
other place I know of.

Q. That is about three miles
above here is it not?

A. Yes. But the Putah Creek
we generally see the water
from the Putah Creek in the
tide first. Then from Cache
Creek. Then from the Sacramento
river. That is the general order.

Q. Then when the American
gets up to a high stage.

that comes in for a share of the filling up too?

A. Yes, Frequently the American comes first.

Q. Sometimes it gets in first?

A. Sometimes the rain is East and it comes first from the American. Then again the rain is west, and it comes from these creeks. Then again it is away north and then it comes from the Sacramento.

Q. Isn't it the fact that ~~the~~ very often the Sacramento gets very high while the American remains low? A. That has been the case within three or four years twice.

Q. Well, how often has that been the case during the last thirty two years?

A. It is very seldom.

These two years 1878 and a year ago this last winter were exceptions.

Q. Do you mean to say that no time prior to that time —

A. No

Q. That during the past 32¹⁷⁹ years that the Sacramento River did not rise first from the contributions of water coming down —

A. No I don't mean to say that. I say the exception is ~~when~~ the Sacramento river rises first, and the Sacramento comes from a long distance.

Q. The Sacramento more frequently than the American does it?

A (Cont'g) The Sacramento goes for a long distance and even when it rains up at the head of the Sacramento first, it very seldom gets here until the American has risen and fallen again.

Q. But it does sometimes?

A. Sometimes

Q. When the Sacramento is high up to a certain height I will ask you what is the high water mark? What is called high water mark generally?

A. Well, it has varied

Q. Well, it is between 24

and 26 feet? A. It has been increasing for the last six or eight feet rapidly.

Q. So you have told us on the direct examination, but I am not inquiring about that now. I am asking what is generally high water mark from 24 to 26 feet?

A. Well, we date the high water mark from the last flood, and that was about between 26 and 27 feet.

Q. When the Sacramento River is up to 24-5 or 6 feet it is considered pretty high isn't it?

A. Pretty high, yes.

Q. Then if the American river gets a flood in it from successive rains in the mountains, or the excessive melting of snow in the mountains, and that gets high also, then it produces an unusual flood, doesn't it?

A. Yes

Q. By reason of the —

A. Conjunction

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Q. (Continuing) of the fact that the American river cannot escape, the Sacramento stands as a dam right in front of it?
A. Yes.

Q. It backs the water of the American up 4 or ⁵ ~~five~~ miles don't it? over the low land?

A. The junction of the two rivers at high water makes very high water.

Q. Wasn't that the same in 1852 and 3, and along there?

A. Was it not? Yes Sir.

Q. And that has occurred since and is liable to occur of course again? A. Yes. It occurred last winter.

Q. This place where you said you had 240 acres, that is your place above?

A. Yes

Q. Is that the place where you have been carrying on agriculture for eight or ten years? A. Yes Sir

Q. How much front is it on the river? A. It is

between a quarter and half a mile. I don't remember the number of acres.

Q. How much of it is tule?

A. There is about a little over a hundred acres that is tule.

Q. A hundred acres stands up in these tules 5 or 6 or 8 feet high?

A. No, not now it does not. It used to

Q. How long? A. Well when I first bought it about 1868 the tules were deep there behind it, but now they are not.

Q. Why don't they grow now as high as formerly?

A. Because it has been covered with sand and sediment.

Q. Sand and sediment has pushed the tule back hasn't it?

A. Yes Sir

Q. Made more ground?

A. Yes more ground that has less tule on it?

Q. Where the sediment comes

down it fills it up I supposed 183
the growth of the tree &

A. Yes, to a certain extent.

Generally it destroys the tree.

Q. What width of land was
thru on your place say in
1849 and 1850 to 1852. of what
you would call arable land?

A. It is about half a mile
there.

2. How far back does this
strip of land run?

A. Some winter they would
cultivate it three quarters of
a mile back.

2. How far back does that
land run?

A. My land runs a mile back.
They raised wheat on it before
I got it. $\frac{3}{4}$ of a mile back.
good wheat too, but that was
an exceptional season.

2. What season was that?

A. Well I don't remember
It was one of those dry seasons
that we had in early days
here, 1853 & 1854 I think come
where along there I think

some years later.

Q Not 1852, because 1853 was the year of high water.
A. 1853-4 was not high water. 1852-3 was.

Q This material that you say was deposited on the land ~~lands~~ understood you to say it consisted of three elements, first sand, then slickens and the sediment? A. Yes, sir.

Q Did you ever make a close examination of this material — any analysis of it? A. I never made an analysis of it nor sir.

Q Well what is the difference between that portion of it that you call sediment and that portion of it that you call slickens?

A. The difference is, that the slickens is the finest material that comes in the water and the sediment is a degree coarser between that and sand.

Q. The sediment you regard

as being beneficial.

A. That is beneficial, particularly in this way; where it is spread over the whole sole and mixed in with it it makes a better soil than the original.

Q. The slickens is a finer material than the sediment &

A. Yes

Q. And of course finer than the sand & A. Yes Sir

Q. Where do you get this term slickens. Why is it called slickens?

A. Well I don't know.

I don't know the origin of that term. I know we all understand what you mean by slickens. It is the finest material that comes in the water when settled.

Q. Does not that fine material when it becomes dry, doesn't it make a very superior soil?

A. No Sir it does not

Q. Doesn't that when plowed in with the adobe soil improve

it? A. Now I will explain

Q. answer that directly and then explain?

A. I will say that a certain degree of it may improve it I will not say that it does because I have not tried it but I have the other.

Q. You have tried the sediment? A. The sediment.

Q. You have never tried any of the slickens to see whether it will improve it or not

A. There never has been any of the finer material onto my place.

Q. Your place then has never had any slickens on it?

A. No, I don't count them slickens at all. It is some sand and some sediment.

Q. You have never cultivated or attempted to cultivate any slickens? A. I have

Q. (Interrupting) well just answer? A. No I never

have cultivated it.

Q. Do you know from personal knowledge of any cultivation of the slickens so as to know whether it is capable of improving land? A. Yes

Q. Or being good land itself?

A. Yes I do

Q. Was it plowed up?

A. Yes, and planted.

Q. Where? A. On the Mathina place down here.

Q. Is that the place that now belongs to Dr Snyder?

A. It belongs to Dr Snyder, yes.

Q. When have you seen that cultivated there?

A. Well, it was before Dr Snyder got it, when Mr Mathina owned it, under it some three or four years back.

Q. State when it was, what year it was?

A. Well within four years, must have been about three years ago.

Q. Who cultivated it, and what was it planted to

A. There was potatoes plan-
ted in it by Mathina and his
son in law.

Q. They planted potatoes
in it?

A. Yes

Q. They must have con-
sidered it pretty good soil
or they would not have put
potatoes in it would they?

A. Well, people make mis-
takes sometimes in that
respect. I don't know what
they considered it.

Q. Well if they had the
same opinion of it that
you have, that it was death
and destruction to all agri-
culture they never would have
planted potatoes in it, ^{would} ~~would~~
they if that had been their
opinion?

A. I presume not
they would not want to
lose any thing, yet we fre-
quently experiment as agri-
culturalists

Q. Were they simply Exper-
imenting in this instance?

A. Well I can't tell you

about that

Q What was your general occupation before going into agriculture some ten years ago? A. In this state

Q. Yes. A. Running a ferry and I was engaged in manufacturing agricultural implements and importing them after that, and the secretary of the Agricultural Society after that.

Q In speaking of building levees on the other side of the river you say that in using the material to build the levees, you dug up the natural old bank of the river so that it is destroyed along there and you can not exactly locate it? Some. Yes.

Q On the Sacramento River on the other side, where they are built close to the bank of the river are the generally constructed of material dug from the banks of the river, on the river side and thrown up.

or from the material on the inside?

A. They are generally taken from the banks, the levee standing back a distance. The levee is taken from between the bank and when we place the levee, leaving a dug out place generally. That is the general rule.

Q. I will ask you whether in many instances the levee has not been broken by this current cutting away the bank beneath the levee and letting them fall?

A. Not generally.

Q. Well, hasn't it to some extent?

A. It has in a few instances. I don't think that taking of the natural bank of the river using that material, digging that up to build a levee, doesn't that break into the strength of the bank so as to make it more liable to be cut away by the floods?

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A. Not generally. The system

is to leave width enough on the immediate bank to hold the bulk of the weight of water and the waves as they come, Q. When they set the levee back from the river and take the material from the bank of the river without disturbing the edge.

A. Without disturbing the front-

Q. You leave that to straighten it.

A. They leave that as a secondary protection.

Q. But in many instances they have constructed the levee right on the edge or very near on the edge of the bank haven't they?

A. Some have.

Q. Haven't they done so opposite this city?

A. No.

Q. Isn't it very near the edge of the bank

A. Very near it but not immediately

Q. Didn't they take the

material right up to the edge of the banks, cut away the banks so that you can not locate them now?
 a. In some places they have, but generally when that has been done it has been done where the levee has broken and they have had to repair it three or four times or more than once. Then they have been forced to take the natural bank away.

Q You were asked yesterday to describe the height of the position of the bank of the river opposite the city here and you said you could not find it because it had been dug away to construct a levee. That is what I am referring to. I am asking you whether that digging away does not materially weaken the levee protection?
 a. It renders the levee less protected.

2. You stated that the American river opposite this city was not so straight now as it was in an early day?

A. The Sacramento?

2. Yes. I will ask you if you are correct about that whether the river running right down in front of the city is not just as straight now as it was in 1849?

A. The exception is that a bank has been formed on the opposite side throwing the river on this side farther.

Q. But at low water I am speaking now. Now when you go out on the bridge there you see a sheet of water and you only see one little spot about as big as this table where there is a bar?

A. You could yesterday morning but you cannot now.

Q. Very well, Then it runs

from bank to bank now doesn't it? and the river runs down the stream as it did in 1849?

A. No Sir not now it does not.

Q. But where is that bend in the river opposite this city?

A. Why on the opposite side there is one hundred feet and more of bank that has been formed there the inside projecting this way from the original bluff bank.

Q. Well, that is covered with water now, isn't it?

A. No Sir, it is not covered with water.

Q. Isn't that which you are speaking of a large bar?

A. I said in the centre of the river yesterday meaning you could see a bar. This morning the water has risen and covered that bar.

Q. Very well then it,

covers it now?

A. Not this one that I speak of running from bank to bank this way, that is not covered.

Q. The bar on the other side are you speaking of?

A. Opposite my house running into the river about one hundred feet from the place where the original bank was there, is a bar extending from the bridge down below my house.

Q. Well that is a bar in the river?

A. It is a bar on the side of the river.

Q. Well, it is a bar in the old bed of the old river?

A. Yes but the bar that I speak of as in the centre of the river was just below the bridge and surrounded by water. It was an island.

Q. At very low water

that bar shows itself doient it?

A. In the river?

Q. Yes at very low water.

A. Yes sir

Q. The water is a little above that now, a trifle above low water

A. Yes a few days ago it was out quite a large island. Now it is covered

Q. That is the bar that you are speaking of?

A. No sir, the bar I am speaking of as barring the river joins the river on the other side.

Q. From what point?

A. From the bridge down below my house.

Q. Can you see it when you stand on the bridge now?

A. How?

Q. Standing on the rail road bridge, can you see it?

A. Why certainly.

Q. Standing on above the water?

A. Yes sir, four and five feet above the water it slopes from the waters edge up. That bar joins the bank of the river but the other bay or the island was in the centre of the river and surrounded by water. Now then the bank joins the river. The bay that joins the river is there now

Q. That is the only bar that has made any difference in the general course of the river?

A. Not at high water it does at low water.

Q. I say at ordinary low water, it is the only bar that has made any difference. It does not make any difference in the course of the water at high water?

A. No sir, not at high water

Q. But at low water that

bar is exposed?

A. And the water runs around the side of it? And it makes the water come this side of it?

A. That is it.

Q. Did I understand you to say yesterday that the water in the American and Sacramento rivers was clear up to about six years ago?

A. They were clearer than they are now a good deal and up to six or eight years ago they were very clear.

Q. They were not colored yellow or red at all?

A. Somewhat. The original placer mining began to color the water in the American river.

Q. When?

A. Well as early as 1853-4

Q. Did not the mining on the head quarters of the Feather River and on the Yuba did not that also color the

waters of the Feather River which discharge in the Sacramento about twenty miles above here.

a. Whenever there was a wash from the placer mining originally into the river the waters were somewhat colored.

q. Wasnt the water in the Sacramento here opposite the city at the mouth of the American highly colored reddish yellow prior to 1860 or up to about 1860.

a. It was colored somewhat up to that time.

That is from 1853 or 4 when the placer mining began to be considerable, the water began to be colored more and more.

q. And continues to increase in color?

a. Yes. but it has increased more rapidly of late years very much more rapidly.

q. Do you mean to say

that during the last five or six years it has increased faster than for ten years or fifteen years prior to that time?

A. Yes, its color; but the sediment that comes from the water is something more than a color and consequently when I speak of the color, of the water I do not mean that it carried a heavy amount of sediment.

Q. Well I was not inquiring about that.

A. Well as to color then I will state as I did before, exactly.

Q. That it was never colored with any material that it preserved its pure clear color up to about six years ago?

A. No I don't state so.

Q. You said it was very clear, what do you mean by its being very clear?

A. Up to five or six years ago.

Q. Up to six years ago.

A. I did not say so. I said that it began to be colored when the first wash came from the placer mining, that is what I stated.

Q. Well, wasn't it colored so that nobody would speak of it as being clear water in 1860?

A. Yes at high water it was.

Q. Well, wasn't it at low water?

A. It was not clear in low water. It was less colored at low water than at high water.

Q. In high water it was more colored because it brought down more material.

A. Yes.

Q. It brought down this sediment?

A. It brought down more material and more sediment in high water always, any

river does.

Q. This river in 1860 brought down in the winter when it was high and in the spring floods isn't there a long period of what you call spring floods when the water rises from the melting of the snow in the mountains?

A. Yes

Q. During that period it was highly colored because it brought down material and sediment?

A. The spring floods are always less colored than the first winter floods, but in 1860 the water was considerably colored.

Q. And especially so during high water?

A. Yes The first high water of the season is always more muddy.

Q. The high color is caused by the material in the nature of sediment which it

carries?

A. To a certain extent it depends on the character of the sediment.

Q. What other material enters into it to color it? You say this does to a certain extent, what else colors it?

A. Well a very little of a certain kind of material with color the water when a large amount of other material will not

Q. Well, what is this, material that ~~is~~ small amount will color?

A. It is the fine slickens that colors the water

Q. Then the fine slickens colored it in 1860, didn't it, at high water?

A. Same.

Q. When the water gradually fell, that slickens would deposit?

A. Yes.

Q. Was it known as slickens in those days?

A. No, I don't think the

term had been coined then

Q. What did you call it then, what did you call that stuff coming down in 1860?

A. We called it mud.

Q. Well that is what it is isn't it?

A. Yes, that is what it is. It is only a difference in name. Slickens and mud mean the same thing, yet there are certain kinds of mud that we would not call slickens.

Q. What kind of mud is it that you would not call slickens?

A. Well the coarse, the dark mud we would not call slickens.

Q. It is yellow mud that is slickens?

A. Yes, the finer.

Q. And dark slickens is mud?

A. When it is dried hard and caked it is almost

like a whetstone, that is what it is, only it is a different color

2. Suppose that in the big flood of 1862, or the one just previous to it on the 9th of December 1861 there had been three hundred acres of land five miles from this city on the American river where the natural surface had been all washed off to a depth of eight feet, and carried into the river and washed down, and those deposits were lying around on these shores, what would you have called that?

A. We would have called it mud if it was carried in the water and settled.

2. But if it had come from a soil that was yellow in color you would call it slickens?

A. No, sir, not there. I don't think we had the term.

Q. That is what you call
slislers now?

A. That is what we call
slislers now.

Q. I will ask you generally
Mr Hoag since your residence
in Washington, which commenced
in February, 1849—

A. {Intg} In February 1850.

Q. In February 1850—How
many times has the town
of Washington been overflowed?

A. It was overflowed in 1851-2
It was overflowed in 1852-3
and 1861-2. It was over-
flowed last winter. I
think those are the only
times it was completely over-
flowed. The water has been
up high at other times but
not so as to overflow, I
think the whole town

Q. These are that you have
spoken of as occurring
in 1852, 1862, and 1868, I
think you mentioned that
was when the whole town
was overflowed?

A. Those three times

Q. But hasn't it frequently been partially overflowed during other winters?

A. It has been, I think, in 1868 was the time that there was a break over there, It did not overflow the whole town but the water run through; portions of the town the upper portion of the town was covered with water.

Q. The railroad tracks were swept away to a certain extent between Davisville and Washington, were they not?

A. Yes, I believe so. Let us see, 1868 was it?

Q. Yes, 1868?

A. 1868 the railroad track out there was washed away above Lyles' Bridge

Q. How many times has the railroad track between here and Davisville been broken by the floods passing down through the tides there since the construction of the road

where the track and trestle work has given way and travel been obstructed?

A. Well, I can't state

Q. Hasn't it been as many as four times?

A. When was that built? what year was that built?

Do you recollect, Mr Catlin?

Q. I cannot fix the date exactly

Mr Cadwalader I think it was January 1, 1870

A. I think perhaps about three times. It has been injured several times, but last Winter and once before it was very badly injured

Q. Do you know anything about the debris that is brought down by Cache Creek and Putah Creek?

A. Yes, something in regard to it, I do, not a great deal.

Q. Don't you know that lands near the mouth of Cache Creek have ~~been~~ ^{been}

overflowed and debris deposited to the extent of two to three or four feet deep?

A. Yes sir

Q. Don't you know that there a great many hundreds of acres of land there that are destroyed by the debris at Cache Creek?

A. Yes, the changing of the direction of the creek has destroyed land there and filled it up

Q. Do you know where Nelson's place is?

A. Yes sir

Q. That is debris to the extent of two feet deep from Putah Creek, isn't it?

A. Yes, from Cache Creek?

Q. Yes, from Cache Creek.

A. Yes sir

Q. And that has been reduced so that it is valuable arable land isn't it? His farm on that debris is very good land, isn't it?

A. Yes sir

2. Is there any mining on Cache Creek, that you know of?

A. No sir

2. It is the natural wash of the banks in different places?

A. Cache Creek runs through a very light -

2. [Intg] I don't ask you that. I am asking you whether it was deposited from that?

A. Yes.

2. Have you been up the Cañon? What is the name of that Cañon? Capay Cañon? Capay Valley?

A. Yes

2. It is a narrow valley?

A. Yes

2. With a narrow alluvial bottom on each side?

A. Yes sir

2. Extending to abrupt hills rising on both sides?

A. Yes sir

2. This creek comes down through that alluvial ~~soil~~ ^{bottom}?

A. Yes

2. It is crooked? isn't it?

A. Yes.

Q. And during high floods it will break in and carry off a number of acres on one side?

A. Yes it may

Q. And form a bar on the other?

A. Yes.

Q. This material is brought down to a great extent and lays in the shape of debris, speaking in the ordinary sense of that term, upon very extensive tracts of land in Yolo County, does it not?

A. Yes.

Q. Does not Putah Creek do the same thing to a limited extent or a greater extent?

A. It does the same thing

Q. There is no mining on Putah Creek that you know of?

A. No sir, not to amount to anything

Q. That stream has its rise

where?

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A. In the foot hills

Q. It arises in Sonoma County?

A. Yes sir

Q. It is quite a large river isn't it?

A. Yes, sir, I say it rises in the Coast range

Q. You spoke of there being several fruit orchards prior to ten years ago in Yolo County or on the west bank of the Sacramento river between Knights' Landing and Steamboat Slough?

A. Yes sir

Q. Now how many fruit orchards were there there ten years ago that you know of?

A. Well, I can't remember them; but there was very seldom a farmer located on the river at that time that was not starting an orchard and cultivating a number of trees

Q. Most every farmer would plant a few fruit trees?

A. Yes sir

Q. Some more and some less?

A. Yes

Q. Well was there any man that was in that business as a specialty besides Mr. Reed here on the opposite side of the river, who was what you would call an orchardist and carried on that business in any extensive way?

A. Oh, yes.

Q. Who besides Mr. Reed?

A. Mr. Flanders had a large orchard

Q. Where?

A. Eight miles above Sacramento

Q. On the Yolo side?

A. Yes sir. Mr. Bell had one a mile and a half above

Q. How large were these orchards?

A. Well, Flanders' orchard must occupy from eight to fifteen acres and Mr

Bells' must occupy Yushaps...
as much more

Q. You say this fruit raising has been abandoned generally, did you?

A. Except apples and pears

Q. Now then let me ask you; ten or twelve years ago, when these orchards were started, didn't they almost all of them go into the business of raising peaches and wasn't the market for peaches such that that business was unprofitable; wasn't that before there was a foreign market here for peaches, before any peaches were shipped east, and was not the business rendered unprofitable and abandoned simply because there was no market for it?

A. Fruit culture has not been —

Q. { Int'ly } Answer the question first and then explain

A. Yes; I will say this; I will say yes. Now I

will explain

2. That is right go on

A. Fruit culture, in almost every variety was overdone; at a certain time there being only a local market, but now there let me explain further. I had right opposite Sacramento —

Q {Intg} Well I don't care about going into these little details. That answers my question

Mr Hart Well I don't think it does. Your Honor, I think the witness has a right to explain exactly the proposition that has been propounded to him.

A. I will get through in two minutes.

Mr Hart He wants to explain the material part of that question

Mr Cattin I asked him a simple question whether that business of raising peaches was not over done; I didn't

put it in that form, but whether it did not become unprofitable. You say it was overdone.

A. The business, I will state, Mr. Cattin, positively, was not discontinued because it was unprofitable, but because the trees could not be made to bear good fruit. That is the stone fruits.

Q. Why was the business overdone?

A. Because there was a general planting and a small market.

Q. Well, that is a sufficient answer; we don't want any other explanation.

A. Well, all right.

Q. You stated that lands were injured by the fact that the bed of the river had been raised by these deposits from time to time making the general course of the river lay that much higher; that in

Consequence, the lands on the inside of the levee, this little strip of land along the river, that the water comes nearer the surface?

A. Yes.

Q. And that that is bad for some kinds of agriculture? Isn't it an advantage also to some other kinds of agriculture?

A. Not in the way it operates.

Q. I am asking you the general proportion whether it is not an advantage to lands to have the water come tolerably near the surface?

A. Now, I will answer it by saying that if it comes when we need irrigation then it would be advantageous, but it does not come at that time.

Q. Well, if this bed has been raised up, the bed of the river, five or six feet for the last six or seven

or eight or ten years as the case may be, it is a permanent thing, and if it makes the water rise it is uniform — it is right along from year to year, isn't it?

A. The effect is produced in the Spring. The effect that I speak of is produced in the spring. It holds the water so near the surface and keeps the soil so damp and cold that we cannot put in a crop to do anything early enough. It forces us so far in the Summer before we can put in a crop, to make it grow that it amounts to nothing.

That is what I mean

2. What crops does that injure?

A. Every variety, you cannot raise barley. After you have some barley in January say, and got in a good start, looking green and nice then comes this Spring flood

That you speak of, and that I ²¹⁹
speak of too, and raises the
water so near, and soaks
the roots so much that
it dries out, grows yellow,
and simply dries out. We
call it "water killed."

Q. That is on the low
land?

A. No sir, that is on
the land right along the
bank of the river.

Q. The seepage from the
river?

A. Yes.

Q. { Cont'd } Comes so near
the ~~river~~ surface —

A. Yes.

Q. { Cont'd } That it destroys
the roots?

A. It destroys barley. It
destroys trees.

Q. Mustn't that be on
ground that is nearly on
a level with the water in
the river?

A. Exactly, and so all the
land along the river is

nearly on a level with the water in the river at that time

Q. That is on this strip we call swamp and overflowed land?

A. No sir, Well, we called it Swamps and overflowed land when we took it up, but it is the best land we have on the Sacramento river. It operates that way on the best land we have

Q. It is all swamp land around the Sacramento River? You say that is the best part of your swamp land?

A. Yes sir, it is the highest part. There is no place on the Sacramento River that is not injured in that way. There is not a farm on the Sacramento river that is not injured in that way by seepage water coming up

Q. For how long has that

been?

A. That has been growing worse and worse for the last six or eight years, but it has now become intolerable almost.

Q. Hasn't there been as much cultivation during the last six or seven years as there was prior to that time?

A. No. sir, there has not been as much successful cultivation there are more people engaged in agriculture but there is less successful—

Q. {Intq} There is more reclamation of these banks by levees, a large one cleaned up and grubbed for cultivation than there was before, is there not?

A. Well, there has been very little cleaned up in the last five or six years, but what I mean to say is this; That while we have endeavoring to cultivate

it has been an unsuccessful cultivation. For instance, we lose our crops. We put in a crop a year ago this last spring, it was a general thing that we got in a crop along the river and it was not a general thing that we harvested one.

Q. Are not those failures caused by an early hot weather, to a great extent?

A. No sir, it was caused by a rise in the river and seepage water destroying the crops.

Q. Were you acquainted with the cultivation on Grand Island, and Sherman Island?

A. Not much.

Q. Island?

A. Not much.

Q. Randall Island

A. I have never been there except once on those islands.

Q. Are the not affected in the same way?

A. I presume they are, but not so much.

Q. Don't you know, as a matter of fact, down there that they raise better crops on the land than could possibly have been raised at an early day?

A. That they raise now more than would have been possible in an early day?

Q. Yes.

A. I know that since they have attempted to reclaim them they have raised some years good crops, but I know as a general thing it has been a failure lately.

Q. Do you know anything about the orchards on the Sacramento River on the side opposite the Yalo Bank?

A. On this side?

Q. Yes. A. Yes sir.

Q. Have they been troubled in this way? Have they not been very successful orchardists, those that are in the business? A. On the Sacramento side,

2. And on Grand Island? 224

A. On the Sacramento side of the Sacramento River, commencing about seven or eight miles down and running down to Steamboat Slough, were formerly the garden —

Q. { Int'g } Just come to my question. Don't they raise fruits there very successfully? A. They used to very ~~successfully~~ ^{and they do it now.}

Q. How do you know?

A. I know from general report.

Q. Don't they raise more largely and more successfully have not they done so during the last four or five years, that they had prior to that time? A. No sir.

Q. In what respect have they not? A. Their peaches, and stone fruits generally have been injured. Mildew was the first thing

Q

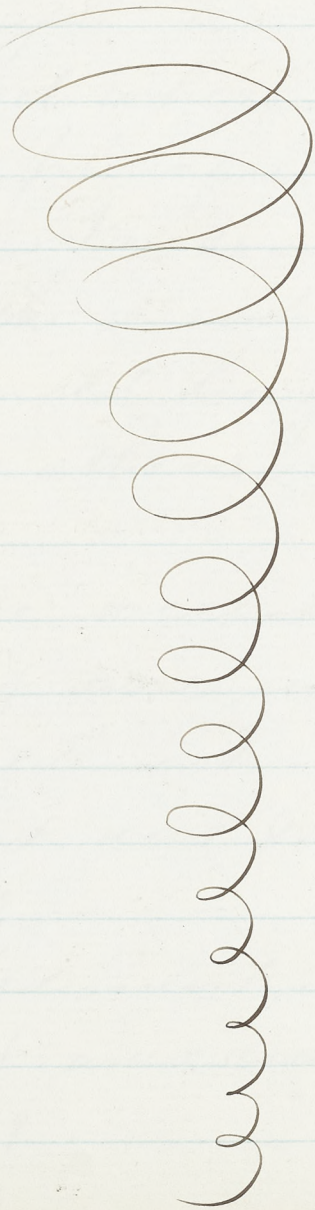
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that attacked their peach trees,
and they attributed it to
water at the roots.

Q. It does not injure the
peaches and pears I understand
you? A. It injures peaches

Q. I mean pears and apples.

A. Not so much. It injures
apples more than pears. Pears
will stand right in the water
and bear.



The Direct Examination

J. N. Hoag

Mr. Hart Q. You said that somebody had put in some potatoes in some of these slickens, what became of those potatoes?

A. Well, they didn't grow.

Q. Where was that?

A. Well, I will state it was within four years. I think it was about three years ago.

Q. And where? A. On the Martha place there was some planted. In some places on that soil, with a rod of each other there would be good potatoes, and in others there would be none.

Q. Where were they good potatoes?

A. They were in this what we call sediment - good soil.

Q. That was sand and clay mixed?

A. Yes.

Q. Sediment is, is it not?

A. It was coarser than fine slickens?

Q. And in the fine siltens you say it did not grow at all?

A. Nothing will grow in it

Q. Well, did they grow at all in the fine siltens, the potatoes, at that time?

A. Well, I didn't see them, that I know of, to know whether they grew at all, but they raised no potatoes.

Q. Where is this place located, with reference to this town of Washington?

A. Below

Q. How far?

A. About $2\frac{1}{2}$ or 3 miles.

Q. How near the Sacramento River?

A. The place joins the Sacramento, that is comes to the bank, and runs back a mile or a mile and a half or so

Q. You speak also of some earth that was washed down, Cache Creek and Putah Creek?

A. Yes.

Q. What is the character of that earth?

A. Cache and Putah Creek, both of them

run through a light sandy loam.

Q-Where? A-From their sources to their mouths, and this loam washed from these creeks will make very good soil even after it is washed out and deposited again.

Q-Where was that deposited?

A-At what we call the sniks of both creeks. They both run into the tule and about their mouths is farmed this higher land by filling up.

Q-What is the difference between the land with reference to height, attitude? What is the difference between the land where Putah creek and Cache Creek empty their debris or whatever it is, that comes down and the lands along the bank of the Sacramento river?

A-What is the difference in height?

Q-Yes. That is generally speaking? A-I can only

tell by comparing the water.

Q. Well, you need not say so many feet, but what is the general difference in the nature of the country there with reference to the subject of height?

A. Well, generally the sinks ^{or near the sinks} is out of ~~water~~ ^{when the banks are out of water} water, but we can't tell exactly, by that because it depends on whether the water is high in the Sacramento at the same time it is high in the Putah.

For instance, on the other side, when the creeks are high the water will be high over there and we won't have much water on this side of the tule.

Q. Are these sinks in the basin or are they on the high banks? A. They are running from the basin up to the high banks.

Q. Does the Sacramento river run through a basin?

A- No

Q- What does it run through?

A- The Sacramento river runs through banks apparently made by itself.

Q- It runs through a ridge doesn't it?

A- Yes; through a ridge.

Q- Does that ridge recede and form a basin, or does it rise higher as you go from the river

A- As you go from the river it recedes.

Q- And then goes down into the tule? A- Yes

Q- These two creeks run down into the tules in that basin and find their sink in the edge of the tules.

A- Yes; on the edge of the tules.

Q- And it has brought down this substance that you say comes through the soil, and deposited it at the sinks?

A- Yes.

Q- And there formed high land

A. Yes.

Q. And that you say is subject to cultivation?

A. After it has been exposed and plowed up for a few years, that becomes good soil; at first it is not very good soil.

Q. What is the difference in that soil that comes down through Putah creek and Cache creek and slickens and mud that comes down the American river? A. Well, the one is soil and the other is slickens. The one does not lose its characteristics as soil, because it is soil originally, arable lands. It is simply displaced by washing and the other is a material that colors and almost stains water, as it were, the slickens, and when it deposits it is almost in the nature of soapstone or paint.

Q. Is there any soil in the

Sacramento valley corresponding to the slickens that you speak of?

A- No sir, I never have seen any except where it has been washed down.

Q- Did you ever see any place where that slickens ^{the soil?} is in?

A- Not in the soil

Q- Did you ever see it where it comes from?

A- I never have seen except where I know that it has been washed on to the soil of late years. It does not exist in the soil in localities or spots or anything of that kind if that is what you refer to

Q- Where does it exist?

A- It exists where it has been brought by overflows

Q- You don't know where it comes from, or do you?

A- Well, I know it comes from the rivers.

Q- Well, do you know where it comes from originally?

A- Well, yes, I know it comes from the mines.

Q The mountains?

A Yes it comes from the mountains.

Q Do you know anything about the elements of this stuff that you call slickens?

A The analytical elements;

Q Yes. A No, I do not, I never have analyzed it.

Q Do you know what caused its redish color?

A No, I could not say.

Q But you say it is entirely different from the stuff that comes down Putah creek.

A Yes sir

Q And Cache creek,

A Yes sir.

Q In about what quantity has this come down Putah Creek and Cache creek?

A Of this soil?

Q Yes sir,

A In digging wells in Cache Creek valley or even about Woodland they find old beds of Cache Creek filled with cobbles showing that they were old beds of the Creek. Now then, reasoning in that way

that whole country over there has been made.

Q At some time? At some stage of the world?

A At some time, yes sir.

Q But I mean recently, within the last fifteen or twenty years.

A The present mouth of those creeks, Cache Creek I suppose contains a number of hundred acres at what is called the mouth of the creek, the set things about the mouth of creek, grown up with willows and alders, and that sort of thing.

Q That is right along on the edge of the rim of the tule?

A Yes, running out, a spur as it were into the tule.

Q In addition to the water that comes from Cache Creek to this place where this land has been formed, is there any other water ^{that} ~~creek~~ comes there?

A There is a willow slough.

Q Does the Sacramento river ever run in there?

A- Ah yes, the Sacramento river runs in there but generally comes in from above.

Q- From a point above where?

A- From the point above Feather river.

Q- Is there any shikens in the Sacramento at a point above Feather River?

A- Not to my knowledge.

Q- What did you see that last?

A- I have not been on that river for four or five years, but before that the river was clear.

Q- The water was clear?

A- Yes, the water was clear.

Q- Speaking of that with reference to the cleanness of the water, did you ever see where the Sacramento and Feather join?

A- Yes sir.

Q- What do you notice there if anything?

A- I notice that the Sacramento is clearer.

Q- What particular thing did you notice at the junction

of those two rivers if anything, as indicating the difference of the water between the two rivers? A - It is very similar to the difference which I described here between the American and Sacramento.

Q. Is it any more marked?

A - The Sacramento water on the Yolo side is clearer than it is here, and the water coming from the Feather river was not when I saw it, as muddy as the water coming from the American is now.

Q. What were the colors of the river on the two sides there?

A. One was water color and the other was slickens color.

Q. Standing from a distance what color would you say?

A. I mean the natural color of clear water.

Q. Blue?

A. Yes.

Q. One other question I want to examine you about. Was there a flood in Washington in 1849 covering the town?

A. In the winter of 1849-50 I think most of the town was under water.

Q. Do you know how many inches of rain fell that year?

A. I don't remember.

Q. You say there was a slight flood in 1849 but it did not cover the entire town.

A. I think not.

Q. Was there a flood in 1850-1?

A. In 1850-1, I believe there was. That is there was pretty high water in 1850-1. Let us see.

No I think not. I was thinking of 1851-2, but I think that 1850-1 was the open winter.

Mr. Catlin - Q. Was not the legislature in session in 1851-2 and did not they have to leave here and go to Vallejo in consequence of the high water?

A. That was 1861-2. The Legislature was not in session here in 1850-1.

Mr. Harb Q. Was there a flood in 1851-2?

A. I think there was

Q. Did it cover the entire place?

A. Let me please state. I think there was some pretty high water in 1851-2

Q. Was there a flood in 1852-3

A. Yes Sir.

Q. That was the big flood?

A. Yes.

Q. You said yesterday there was something over thirty six inches of rain that year?

A. That year?

Q. Yes. A. I think it was thirty nine or thirty six

Q. 36.66, this table gives it was there a flood in 1853-4?

A. I think not.

Q. Was there a flood in 1854-5?

A. No Sir.

Q. In 1855-6? A. Well I can not state positively. There was two or three years of dry weather I think commencing at 1851-2, 1852-3, and 1854-5, I think those were three dry seasons.

Q. No, no, 1852-3 was the big flood?

A. 1852-3, 1851-2 was the dry season was it? Now then I can not state as to 1855-6.

Q. As to 1855-6 you can not state?
A. No.

Q. Was there a flood in 1856-7?

A. It is impossible for me to remember the dates.

Q. Well now then I will ask you generally whether or not the floods have been more frequent in Washington since 1870 than before, or less frequent.

A. They have been more frequent.

Q. How have they been for the last ten years at Washington?

A. They have been more frequent for the last ten years.

Q. Have you ever had any season there when your town was dry during the winter within the last ten years.

A. Yes. Let me see. 1877 I think, was a dry season. We did not have any overflow.

Mr W. L. Belcher. The winter of 1876-7 or 1877-8?

A. In 1876-7. I think
Mr Harb, Yes, that was a
 dry season, that is, compara-
 tively dry.

A. That was the season I re-
 ber to when I said that we
 could travel to my place
 or burn or bice miles up all
 winter. We have not had
 a season since that we could
 I think that was the season.

Q. Was the water during each
 one of the other seasons during
 the last ten years come onto
 the town of Washington or only
 back of it?

A. More or less.

Q. Into the town? A. Yes
 so that the County road has
 been obstructed every winter
 since that date.

Mr Cadwalader - Mr Hoag
 do you know where "main
 Prairie" is? A. Yes.

Q. It is an what is called
 Cache Slough isn't it?

A. On Cache Slough at the
 head of Cache Slough or near there.

Q. Cache Slough connects at the Sacramento River very near the town of Rio Vista, with this tule that runs between here and Davisville?

A. Well it is at the lower end. It is at the extreme south of the tule, Cache Slough is, it runs up into the country towards Vacaville.

Q. How far is it from here by the river to the mouth of Cache Slough?

Mr Callin - The Combs will understand that Cache Slough and Cache Creek are entirely different. Cache Creek is to the north and Cache Slough to the south.

Mr Badwalader - How far is it from here to Cache Slough?

A. It is just this side of Rio Vista, my recollection is, the mouth of it.

Q. About a mile above Rio Vista?

A. Yes I think it is twenty five miles to the Steamboat

slough and then about eight 242
or ten miles through Steamboat
slough, that is my recollection

Q. Does not the water in
the tule West of here take
its level from the water of
Main Prairie? A. Does it not?

Q. Yes Sir. A. No. I don't
know that it does. When
the water in the tule West of
here, the water in Cache Slough
is high, the water of Cache Slough
is also high, but I don't know
that the water takes its level
from the slough.

Q. What you call the tule
is a channel starting at the
north bank of Putah Creek
or the north bank of Cache
Creek? A. Yes Sir.

Q. And running from there
to Main Prairie? A. Yes Sir
at very high water, the water
from the tule runs into Cache
Slough Current but it has to
be pretty high to go up as high
as Main Prairie. Then it dis-
charges, Cache Slough running ^{along}

near the Montezuma Hills. I believe it all goes into the river that has not already entered the river. It all goes in through Cache Slough but it discharges into the river through the various sloughs running from the tule.

Q. But I mean these sloughs all being stopped up, the outlet of this tule would be Cache Slough? A. Yes that is so

Q. Now this Slough or the center of the tule from the North bank of Putah Creek to Cache Slough runs about six miles from the Sacramento river?

Mr W. C. Belcher Just let him tell how it runs if he knows.

Mr Cadwalader Q. And about fifteen feet lower than the banks of the river?

A. That is about the average

Q. This basin is from five to eight miles is it not?

Mr W. C. Belcher If the Court please, I object that the questions are leading. If

This witness knows let him tell

The Court The questions are rather too suggestive I think Mr Cadwalader.

Mr Cadwalader. Q. Putah Creek empties into this basin

A. Yes Sir.

Q. Same distance South —
Mr Catlin (Interrupting) I object to that question on the same ground that the objection was made before. The Court suggested that it was altogether too leading. This question is still more leading in its character.

Mr Cadwalader, Do you know where Cache Creek empties into this basin A. Yes.

Q. Where? A. It is north of this place and west, pretty nearly north west from here

Q. And at what distance from the town of Washington?

Mr Catlin - Wait one moment
Mr Cadwalader, I object to your commencing a new

examination of this witness.

The Court - I think gentlemen I shall have to make it a rule that one counsel on each side must examine the witness. It is a rule that I usually enforce, and I think it is a good one.

Mr Catlin - If the Court please before any decided ruling is made on that, I would suggest that there are a good many branches of this subject matter that it will be almost an absolute necessity for different counsel to examine different witnesses. The rule that one counsel should ^{examine} ~~each~~ witness is correct enough.

The Court - That is what I mean.
Mr Catlin - My objection is that this is opening a new subject matter.

The Court - I think I will have to restrict you to the rule that one counsel shall finish the witness on each side.
Mr Cadwalader, we consent to.

your Honors ruling

Re - cross examination of
J. N. Hoag.

Mr Cater Q. In your description of slickens I will ask you whether the soil burned by slickens is not very much like the soil burned with adobe, only one is black, and the other a reddish hue?

A. No, I don't think they are alike.

Q. What is the difference

A. The difference is that the black soil, although it is pretty fine, it has the elements of growth in it, of growth and vegetation.

Q. What are those elements?

A. Well, the black soil is made up of loam, and vegetable production, vegetable growth, decayed principally, while slickens —

Q. (Interrupting) You never have analysed slickens to know

what it is composed of have you?

A - No

Mr Hart - I insist that the witness be permitted to answer these questions when they are propounded

Mr Cathin Well go on if you want to explain further I will ask you whether they are not both soapy, both soapstone, and feel greasy in the hand or fingers when you handle it, sticky, and cracks when it gets dry.

Mr Hart - I am going to insist in your honor please on a full answer to that previous question. There was a question that was asked and the witness had first explained the elements of one and then said "while slickens" and was going to proceed to explain the other. Now I insist that he be permitted to answer that question

The Court If you have any further answer to that Mr Hoag

give it

A. I will state that the difference between slickens and adobe soil is, that the adobe soil is composed of decayed vegetation with clayey substance which renders it somewhat sticky. But under favorable circumstances it is the richest and most productive soil we have. It will last the longest and produce the best but under other circumstances when it is hard and dried by heat it becomes more like a brick. It bakes as it were. Then it will not produce. It shuts off the elements of production under those circumstances.

Q. What do you mean by shutting off the elements of production? The vegetable material is there yet isn't it?

A. I mean to say this: that after a seed has got a good start it will nourish it, and grow a good growth but it will not allow it to come out

of the ground. For instance you sow small seed in adobe soil when it has been wet and dries: it bakes on the surface and will not allow it to come out of the ground but keep that in good condition not too wet when you plant it, and it is the best soil we have.

Q. I was not inquiring whether adobe soil was good soil

A. Now then you asked me the difference. I desire to explain

Q. Well, go on.

A. Now then when you came to slickens, I can not say what it is composed of by analysis but it is more mineral substance. It has not the decayed vegetation in it

Q. Just state right there what mineral substance is there in it?

A. Well I won't undertake to say by analysis I say, but it is different.

Q. Do you know whether there is any mineral substance in it, and if so state what the mineral is?

A. Well, I know that it contains alkali more or less and it does not contain decayed vegetation

Q. Don't soil frequently contain alkali

A. Some does, and some does not. Some has one kind of alkali and some another

Q. Then they resemble each other in that particular. They have alkali in?

A. They are similar in one respect since they both contain alkali; but one will produce and the other will not. Now then that is a general answer. That is an Agricultural Answer.

Q. It is not an answer to my question. I did not ask you anything about their qualities at all.

A. What is your question then?

Q. My question was, whether what you call slickens when you bind a body of it, whether it does not resemble very much the adobe soil except in the matter of its color?

A. I say no.

Q. Does it not resemble it?

A. I say no, but the reason that one will produce well while the other will not.

Q. I am not talking about its productiveness but about its qualities?

A. Well, I infer quality from production. I infer there is a difference because one will produce while the other will not but analysis I don't know anything about.

Q. In other respects they look very much alike except in their color? A. No, white and black don't look alike.

Q. Well I say except in their color do they not look

alike?

A. No sir they
do not

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Q. Very well in what other respects?

A. Well slickens in any shape
you are a mind to put it, is
smooth, slippery, slimy.

Q. Isn't adobe slippery too,
if it is wet?

A. No sir, well it will crum-
ble and run when it is wet,
but when it is dry it is very
different.

Q. Isn't slickens when it is
dry, very different, is that
slippery when it is dry?

A. You take slickens and rub
it on your finger as dry as
you are a mind to it will
paint your finger while the
black soil will not.

Q. It will not make your
fingers black?

A. It will adhere to the
surface of your finger
and the black soil will not

Q. Do you say slickens will
not produce at all?

Q. It will produce willows 253
and such like things, but won't
produce anything that we saw
on the land

Q. Don't you know, or do you
know whether or not considerable
tracts of land are planted
on slickens and that produce
everything that can be produced?

A. I say that that is an
what I call sediment, that
is the difference

Q. On what you call sediment?

A. Yes that is the difference
it is a coarser nature than
slickens

Q. What did you say the color
of slickens was?

A. I say there is more or
less mineral in it

Q. I ask you what the
color of it was?

A. Oh, the color is a light
sort of a drab color

Q. A sort of a light yellow?

A. Yes.

Q. The stuff that came down
the American River you said

was of a reddish color. That 254
was not shickens then was it?

A. What is the difference
between reddish and drab?

2. There is no difference in
your idea between a reddish
color and a light yellow color

A. The drab is a yellowish
red or a tint of maroon color
or whatever you have a mind
to call it. There is a difference
in color of shickens depending
on where it comes from. There
are places where the soil is red
and shickens may come from
that. That is what we call
red soil

2. You said you knew where
this shickens came from?

A. Yes, I know where some
of it comes from

2. You said it came from
the mines

A. I know it comes down the
American River and the water
of the American river washes
the mines. Now I know that

2. Don't it wash a good deal

of agricultural land?

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A. Yes, it washes along through the banks of all the agricultural land between here and the mountains.

Q. You said to Mr. Stark that you knew, after being pressed several times, in regard to where it came from, that you knew that it came from the mines?

A. Yes sir.

Q. Do you know what mines it comes from?

A. What particular mines?

Q. Yes.

A. No. I will answer that in this way. I know that it comes from every mine where the water of the American brings it down and washes that mine. I know that more or less comes from there.

Q. Do you know where the mining locality known as Farmers Digging is?

A. No, I do not.

Q. Do you know of an extensive mining bar or place

on the American river about twelve miles from this City Called Farmers Diggings².

A. I know there is a bar up there about that distance from here

Q. Some of it comes from there²?

A. I presume it may be

Q. Do you know where Mississippi Bar is²? A. Very nearly

Q. It is a large bar, a mile and a half or two miles long

A. Yes sir

Q. A large amount of mining has been carried on there².

A. Yes

Q. Perhaps this came from there².

A. It may be, yes, I have no doubt of it

Q. You know it did²?

A. I know it does as well as I know that it comes from any mine

Q. Do you know where Negro Bar is²? A. Yes.

Q. How far is that from this City²? A. I think

Negro Bar is about Folsom

isn't it?

Q. Yes. A. Or Negro Hill

Q. Negro bar is in front of Folsom?
A. Yes, some comes from there

Q. That was mined out and exhausted twenty-five years ago, was it not?

A. Some comes from every mine washed by the river

Q. Some of it comes from the mines on Negro Hill?

A. Yes

Q. Some comes from Mormon Island?

A. Yes

Q. Some comes from Coloma?

A. Yes

Q. Some comes from Alder Creek?

A. Yes

Q. Some comes from Weaver Creek?

A. Yes

Q. And you testify as a witness, that this shaker comes generally from all these mines?

A. I think so

Q. Well isn't that simply a matter of opinion on your part?

that is your opinion? You don't state that as a fact do you?

A. Well, I come to the opinion in this way —

2. I don't ask you how you got the information, but is it your opinion or do you state it as a fact?

A. I state it as a fact.

2. Now then how do you know it to be a fact that any of it comes from these mines that I have named

A. I know that the water comes through these mines, that comes out here from the American river. I know that water with the velocity that it has at high water will bring sediment or debris or whatever it takes up right along with it.

2. Precisely. We all know that. But how do you know that this material which you call slickens came from any of these mines, that

particular material?

A. I know that it comes here in the water

Q. You have described three kinds of material. One is sand?
A. Yes.

Q. The other is Sediment and the other is shikens. Now you give us your opinion and description and knowledge of shikens. I want to know if you know where it came from, whether any of it came from any of these mines that I have named, or whether it came from any of the other lands?

A. Very little shikens comes from land that is agricultural. We know that because we know that rivers upon which mining does not exist, do not bring shikens. They bring a soil with them and deposit it.

Q. Don't the Missouri river deposit shikens?

A. No, not such shikens as we have here.

2. It is a different kind
of Shetters ?

A. Yes, it is sediment, soil.
That is what it is

———— " ————

Testimony
of
John Hoagland

Called for Plaintiff Sworn
Mr. Cadwalader 2. How long
have you lived in California?

A. I arrived in California on
the 27th of September 1849

2. Where did you first
settle in this State?

A. I settled above Washington,
Yolo County

2. How far?

A. Well the property joins the
town, the town plot, about a
half a mile above the present
bridge

2. How near to a place
now known as the New mouth
of the American river?

A. Directly opposite

2. Where was your place
with reference to the Sacramento
River?

A. On the bank of the Sac-
ramento river, on the west
bank

Q. How long did you reside there?
 A. Well, we built there in the early part of 1850, I think, about 1850, we was there prior to that time, but it was some time in June when we commenced building.

Q. Have you resided there every year since or part of every year since.

A. Yes sir, up to the last year.

Q. Do you know the first Swamp Land Commission that was organized in this State?

A. Yes sir.

Q. When was that organized?

A. I think it was organized in the spring of 1859. The act was passed in 1858 is my recollection of that.

Q. The law gave that Commission the control of all the Swamp Land in the State didn't it?

A. Yes sir.

Q. Were you a member of

that Commission?

A. Not the first Commission. I was a member of the commission that was organized under the Amendment Act of 1863. I think the act was passed in 1863, and we organized the next June 1863.

2. State what opportunities you have had of observing the Sacramento and American rivers since 1850.

A. I have been living upon it ever since that time and travelling on it more or less. It was a matter of considerable interest in regard to its general appearance, and the dangers and so forth accompanying it.

2 What was the condition of the Sacramento River immediately below the mouth of the American river in 1850, the fall of 1850?

244 A. Well, it was a very clear, smooth stream when I

first saw it in September
1849

264

Q. What kind of banks did it have?

A. The banks were bold and straight generally speaking, high banks on both sides.

Q. What were the banks composed of as a general thing?

A. The character of the soil?

Q. Yes.

A. Well, it is a kind of a loam, what we call sandy loam - a black sandy loam soil.

Q. Where do you strike the hard pan on the banks?

A. Well, there is very little hard pan on the bank on the west side, that I know of - very little there is some. We found some on the opposite side; on the East bank there are some spots.

Q. When was this new mouth of the American river

Established²

A. The work was done in the fall of 1862, I think about October they commenced to work.

2. When was the water got there through².

A. The water came through about along, some time in December I think we had a little rain which brought up the river.

2. The work was done in 1862 and the water was got through in 1863, wasn't it².

A. Well, in December, I think there was a raise in the river and the water came through there, a portion of it. A portion of it came down the old mouth and a portion through it.

The Court. 2. December 1862².

A. Jenson

Mr. Cadwalader 2. That is what was called a cut-off wasn't it².

A. Yes sir, that was a cut-off.

Q. How far is the mouth of that cut-off from the mouth of the American river

A. Well, it is not far from three quarters of a mile but over half a mile

Q. Do you recollect the old mouth of the American river?

A. Yes sir

Q. Do you recollect the character of the water, in it?

A. Yes sir

Q. Do you recollect whether or not it was part of the original harbor of Sacramento City?

A. Well, for some distance up it was. There was deep water up perhaps probably six or seven hundred feet above the Old Pioneer Mill which stood there at that time

Q. If any, what kind of water craft, have you seen lying up there?

A. Well, I have seen

vessels by in up there, quite large ones.

Q. What kind of vessels?

A. Well, what we call an ordinary sized vessel which would draw perhaps eight or nine feet of water, perhaps ten feet.

Q. Sea-going?

A. Sea-going vessels: there was one sunk there. The hull of one is there yet, I think.

Q. Do you know where that vessel was sunk?

A. Well, I know very nearly where it was sunk, I have seen it frequently.

Q. Well, just state with reference to some of these cross streets in Sacramento?

A. Well it must be somewhere about the line of B. Street or above. Above the line of B. street running straight in.

Q. I mean with reference to some of these cross streets that run north and south?

A. Well that would be

above Front Street. Front street
running direct would run out
into the river on the direct
line it was formerly laid
out

2. About how far from
the faeraments. Fix it in
that way.

A. Well, I think about six or
seven hundred feet. I had a
small cabin there at the
time, in 1849. We went there
and was there that winter
part of it along up till
near January and then I went
away and when I came back
there was vessels moored there
just below. That was above
the old slough that used to
come in there above the
present works of the Railroad
Company. There was high bank,
come down and a slough on
the north side of it that
came out there and on that
~~was the Old Pioneer Mill.~~
was the Old Pioneer Mill.

2. How wide was that
river Channel there?

A. That is the mouth of the American river?²

Q. Yes sir.

A. I did help measure it once but I forget. About six or seven hundred feet I think.

Q. The channel is six or seven hundred feet wide?²

A. Yes.

Q. And how deep?²

A. I never measured the depth of it but it was a deep stream with clear water. It was a very deep stream right up there at that place and above there, there was a deep channel for some distance up.

Q. Did you observe the condition of the water in front of Sacramento below the mouth of the American?²

A. At what time?²

Q. Yes.

A. Very clear water. That was an observation with the old pioneers here, that it was

very fine clear water. It was a general remark of all that Examined there or came up the river that it was a fine clear stream.

Q. That is what is called a straight river, is it?

A. The Sacramento?

Q. I mean in front of Sacramento it is what we call a straight river.

A. Yes, in front of Sacramento, the river runs without much curve.

Q. Are there any bars in the Sacramento there?

A. At that time?

Q. Yes sir.

A. I never noticed anything of the kind or heard of it.

Q. What was the condition of the bank opposite your place, or on your side?

A. At the early time?

Q. Yes sir.

A. Well, we had a good high bank, a strong bank with large trees growing on it.

Cottonwoods - I shone 271
buttonwoods or sycamores

Q. Well, all along the banks
of the Sacramento river there
were trees overhanging, were
there not?

A. Yes sir, very large trees,
I think there was one there
that was six feet through

Q. And for a number of
years they were so thick
and projecting -

Mr. Catlin (Intg) I object
to that question as being
too leading

The Court. Try and not
suggest the answer to the
witness, Mr. Cadwalader.

Mr. Cadwalader Q. State
then how the trees grew
with reference to the river?

A. Well, they were located
along the margin of the
river, all along the river
in fact on both sides there
were trees of that character
growing when I first saw
the river and at this

particular place above the town of Coalington they were quite numerous, lying all along the banks.

2. Now, in regard to their projecting over the banks?

A. Some of them projected over more than half perhaps and some of those sycamores, there would be clusters of them, four or five in a cluster. Some of them would hang over the river side. Others again would run up straight and some lean on the bank side. There was a cluster of those trees right in front of my house that are now in the river.

2. During the year 1850, what class of vessels did you see in front of Sacramento City?

A. Well, I saw vessels of the same character that you would see at any seaport town, East.

2. At any seaport town?

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A. Yes, some large and some small, two masters and three masters

2. Do you know any thing about the depth of the water in front of Sacramento City in early times?

A. I never made any measurement.

2. Did it come under your observation to see so you could form an opinion?

A. I recollect in early times we were engaged in the fruit business. We used to take our fruit sometimes on a flat boat, and use what is commonly called a setting pole. We took a long pole to reach bottom and in some places we could not reach it at all. It was fifteen or eighteen feet long.

2. At what stage of the water?

A. At the ordinary stage in the summer time.

2. At what part of the

Sacramento River with reference
to the City?

A. Well, coming from where
I live, down to the Steamboat
landing in front of Sacramento
in some places but in the
center we could not reach
bottom at all. We would have
to sheer off and make a
landing with oars. I suppose
that, from my observation that
the river at that time was
from fifteen to eighteen feet
deep at low water mark.

2. What was the charac-
ter of the shore on the
Yolo side immediately below
you?

A. The same character of
all the soil at my place
and above there about the
same general character, black
sand loam.

2. There was a place
called Fisherman's Beach?

A. Yes sir, that was on
my place?

2. Where was that?

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A. That was on part of my place.

Q. Describe that?

A. That was a very smooth nice beach sloping off from the bank a distance along the bank of about perhaps six or seven hundred feet

Q. What was that composed of?

A. It was composed of a kind of a dark sand, smooth nice sand and hard bottom so hard that a horse could hardly make a mark on it. We used to use it as a watering place for stock and also it was used as a fishing ground, drawing some

Q. How near to the old Yolo bridge did that extend?

A. Well, I don't think it is quite a mile. It is very near a mile however from the old Yolo bridge to that spot.

Mr. Catlin Q. A mile above it?

A. Yes, about a mile

above, take the west bank of
 2. From the bridge up
 A - Yes, from the west
 End up, near a mile

Mr. Cadwalader 2. How
 wide was the water channel
 during those early times in front
 of your place and extending
 down to the bridge, say to
 the low water channel.

A. Well, I should say
 low water channel would be
 about in the neighborhood of
 Seven hundred feet although
 the channel at that time
 was right at the banks,
 the tide used to bring the
 water up along the banks
 close to the margin of the
 bank.

2. Were there any bars in
 the river below between your
 place and the lower end of
 Sacramento City?

A. I never ~~heard~~ of any
 or heard of any.

2. If there had been any
 would you have been likely to

have seen them?

A. I think I would, we were on the river every day for several years, almost, that is during the Summer Season.

Q. Your house was in full view of the river, wasn't it?

A. Yes sir, where we first built was about one hundred and six or 67 feet from the bank.

Q. Where did you get your water from?

A. We drew our water from the river, that is, we pumped it up from the river.

Q. When did you first observe any considerable fall in the bed of the river, from your place down through the harbor of Sacramento?

A. Well, not until after the river was turned in there, two or three years after that there was considerable lodgment.

Q. How high were the

bank & above low water mark
 in Early times from your
 place down to the lower end
 of Sacramento as a general
 thing on each side ².

A. From low water mark ².
 Q. Yes sir

A. I think about eighteen
 or nineteen feet, about nineteen
 feet would be the average

Q. What was the depth of
 the water in front of
 your place ².

A. The depth of the water
 in front of our place at
 the bank and sloping off
 would be ten or twelve feet
 and deeper out in the channel

Q. I mean in the center
 of the Channel ².

A. I think, about twelve
 or thirteen feet there

Q. How was it as you
 got down in front of
 Sacramento City ².

A. We used to load our
 boats there at the house
 or at our place and then

go down with oars and poles.

That was the way we went with our truck at that time. Most of it was ^{disposed} ~~deposited~~ of in that way.

Q. How much of a fill, if any, has occurred in the river in front of your place, and down in front of Sacramento?"

A. All the old bed is filled.

Q. How deep is the fill?

A. Well at the present time the fill of the old bed, taking the old line of the banks is, I should suppose five or six feet above the water at the present time and then it slopes off towards the water.

Q. That makes a fill of about how many feet?

A. That would make a from the old original bed as it stood, of sixteen or eighteen feet.

Q. That is from your

place down, sweeping clear
past the front of Sacramento?

A. Well, this fill

that I speak of commences

Mr Cattin & Dittg? Are you
speaking of the whole
bed of the river being
filled up?

A. I am speaking of
the original bed

Mr. W. C. Belcher 2. of the Sacramento, or of the American?

A. Of the Sacramento, of the original bed of the Sacramento river from the east side of the present mouth of the American river, taking out the trees that stood on my bank now lying in the river; the east bank of the Sacramento river, and it is all filled between those trees and the old east ~~bank~~^{line} of the Sacramento river, with mud and sand.

Mr. Cadwalader, In other words the entire bed of the river on both sides and in the center has been raised 15 feet? A. No that is not it. The river since the American river was changed, cut out a channel on the west side and runs now on land that formerly was part of my farm and the old bed of the Sacramento river is filled with this mud and debris.

Q. I am speaking of the bed of the Sacramento river coming down from your place the foot of Sacramento City.

A. There is more or less of this bar extending down below the bridge, or about the bridge. Then I think that it has cut out and fills on the west side again, the channel runs under the bridge, out along J street or J street. It has probably cut out but there is a bar formed on the Yolo side again in front of that. That is about the condition, the way it is now.

Q. What is the greatest fill you have seen in the bed of the Sacramento river in front of Sacramento City?

A. Well, there is a bar there now, that is above water, that must be 15 or 18 feet high.

Q. How much is the fill clear across? A. Clear across

It is from the banks of the river some two or three hundred feet

Q, How much? A, From the banks of the river some two to three hundred feet, I don't know the exact distance. That is, the old banks of the river at Washington

Q, What I want to get at, Mr Hodgdon, is this: What is the fill on the whole bed of the river? not the number alone, How much has the bed of the river been raised in front of Sacramento City since the opening of this new mouth of the American river? A, Well, I have means of getting at the entire fill across the stream excepting by the observation of those bars that present themselves above the water. Whether there is any fill right directly in front of Sacramento City, I don't know

Q, Did you ever see

steamboats stuck there?

A. Yes I have seen steamboats so they could not get up above R street.

Q. What years did that first occur? A. I think it was in 1866, 1865 or 1866, along those years, that they were unable to get at low water mark above R street. I think 1865 and 1866, somewhere along there. I am not certain as to the date.

Q. Well, whatever fill there is, I understand you to say, has occurred since 1863?

A. Yes sir

Q. You don't know precisely what that fill is, except on the Yolo shore?

A. Except on the Yolo shore there, there is a large bar puts out more than half across the river, and a portion of it is visible at any time.

Q. You know, you say, when steamboats could not

get up to this City further than the foot of R street, that was about 1866?

A. I think it was 1865 and 1866, somewhere along there.

Mr Cattin Q. Do you mean they could not get above, or merely that they got stuck there? I do not understand him to say that they could not get above there, but that they were stuck there.

A. They stopped there on account of the bar and were unable to get up and turn around or back out. The dam was built by the city for the purpose of removing that bar.

Mr Cadwalader Q. Were those bars there previous to 1863?

A. Not that I ever knew of, or from my observation they were not there before that.

Q. When did you notice any appreciable change in the character of the water of the Sacramento River in front

of Sacramento City? A. Well, not after 1862 and 1863, I don't think there was any material change.

2. Are you able to state the character of the water since 1863 which has been discharged by the American into the Sacramento river? A. Well, when the waters first raise in the American which occurs generally before the Sacramento, the water is very thick and muddy.

2. How thick or muddy?

A. Well about as thick as it could run well, there are large bodies of mud moving with it, and material

2. More like mud than water?

A. About as much mud as water.

2. Have you ever seen what might be called liquid bars coming out of the American into the Sacramento since 1863, and usurping substantially the whole channel of the Sacramento river?

Mr. Catlin. I object to that question as leading

The Court The witness may explain if he can, the nature of the deposit that was discharged into the Sacramento in his own language.

Mr Cadwalader. Explain then.

A. Well, I will explain then in this way; after it passed ^{through} this new cut, as you call it, always when the water went down it left large bodies of sand and mud on one side or the other of the stream. That is, the American drawn off to one side when the stream narrowed and became shoal, and when the stream rises the first freshets we have ^{it} come down and tears out those bars and you can see them meeting ^{every} right along, yards after yards of it, and rods of it at a time.

Q. Will, you have not answered exactly the question. Describe the appearance of the water as it comes out

of the American during one of these floods since the year 1863

Q. Do you mean the velocity of the water? or the force of the water, or the Character of its color?

2. The appearance of it, the shape of it, the motion of it?

A. Well that generally comes down with great velocity. It comes down in swells like any stream meeting obstructions, running with great velocity. Meeting an obstruction makes a swell and whirls around, that is about as near as I can answer that question as to the appearance of the water

2. How much if, any of the channel of the Sacramento river would it ^{usurp} ~~swamp~~?

A. Oh, it occupies the whole of it generally

2. Takes the whole of it?

A. Takes the whole of it, contains the current of the whole river from that on until

perhaps for two or three days; three or four days sometimes

Q. What proportion of mud will it leave during those discharges of mud, sand and slickens? A. Well, I don't know as I could tell anything about that any farther than what would naturally be inferred from a very strong stream moving large bodies ~~from~~ of mud and earth. How much ~~it would bear~~ ^{it would bear} proportionately of mud and earth.

I could not state

Q. Now with reference to the other waters, to the waters of the Sacramento, into which it empties? A. You mean its color or general appearance? Q. Yes sir

The Court It is the matter in suspense. I suppose you want to get at; what the matter carries down is

A. There is a very material difference between the two waters as far as the material carried by them is concerned.

Mr. Cadwalader Q. What is the difference? A. The difference is that the American is more highly charged with debris or mud, and sediment and sand.

Q. How much more?

A. Well, it is not perceptible in the upper river at all. We ~~never~~ ~~mean~~ noticed in that at our place.

Q. Well, how much more? How more highly charged would it be with this sedimentary matter than the Sacramento?

A. One would be water mixed up with mud as thick as you could get it, and the other would be completely colored.

Q. Would one be fit for any kind of use and the other totally unfit for all kinds of uses?

Mr W C Belcher I object to that as leading. Let the witness state what he knows Mr Cadwalader Will state

then the uses to which the two water cones be put². A. I think Every-one that comes get Sacramento Water cones get it and use it and cones not use the other

Q. That is not what I asked you exactly

The Court As to its being suitable for use, I suppose McCadwalader. Yes sir or what used cones the Sacramento cones be fit just about the point of junction

A. The Sacramento cones be fit for all family use for drink-
ing or washing pur-
poses. There is a great difference in the matter of settling

Q. Now as to the color?

A. As to the color there is a very great difference. One is clearer than the other.

Q. Was it clear or substantially so?

A. Substantially so.

Q. How would the American be?

A. Well, the American would be muddy and thick and when it stands it leaves a kind of a slime in the bottom when it settles a little.

Q. Could you distinguish the American river water for any distance below the point of junction, if so, what distance?

A. I have noticed it frequently from the bridge, quite a distance down all the way from the line up here to the mouth of the American river. You could notice the difference in the water all the way down as far as you could see off the bridge. I was on the bridge for nine years and had an opportunity to notice it, in that particular

Q. You were bridge tender then

from what time?

A. I was bridge tender there from the fall of 1869 for about nine years I think, a little over nine years until the Charter expired. The charter expired in 1878 I guess it was.

Q. Did the American river ever run across your farm?

A. Yes sir.

Q. In what year?

A. My place was destroyed there, the bank went down on Christmas day 1867. The American river ran right straight across.

Q. Ran right across the Sacramento river?

A. Right straight across the Sacramento River.

Q. Did you have a levee in front of your place?

A. Yes sir.

Q. Did it wash that levee down?

A. It washed away the bank, between 200 and 300 feet of it and took the levee with it.

Q. Where did it go to?

A. Well, it went straight out to the west on into the tules and across the country there.

Q. From there, where did it go to? A. It empties out into what we call Cache Creek slough or Miner's Slough and those other sloughs that lead out from the base of the tules.

Q. What became of the improvements on your place?

A. They were all destroyed.

Q. What improvements did you have? A. House, barn, fences, or chard stock, some stock, farming utensils, horse hold goods and everything else.

Q. It was stated here yesterday that you were obliged to take refuge in a tree to jump from your house to the top of a tree, was that so?

A. Yes, I am the man that was supposed to be in a tree two days and a half.

Q Tell us what kind of debris if any the American River left upon your farm?

A. At that time?

Q. Yes.

A. It didn't leave nothing at that time. There was nothing left there at all. It took everything away at that time.

Q Why was that?

A. The reason of that was that there were no obstructions at that time on the west. There were no sand bars deposited to any extent west of that place and the fall from my place was about nearly fifteen feet from the bank back, and the velocity of the water was so great that it carried everything before it and swept everything else, trees and everything else. It did not leave two trees there.

Q. At what rate did the current travel across your place?

A Well, I would not be able

to state that. I am not pos-
ted as to the velocity of
Currents.

2. If at any subsequent time
the American river crossed your
place in the same manner,
name the time?

A. It has never crossed my
place directly until this last
winter. It has flowed in above
me and below me on two
occasions.

2. When it flowed in above
you and below you, if it left
any debris, state the kind

A. Yes. It filled up the whole
Country. It was all filled
up with sand.

2. What kind of sand?

A. It is generally a light blue
sand, quite a light sand. That
is the prevailing character.

2. Sand that the wind will
catch?

A. Yes, it is sand
that will blow with the wind,
it will blow and form quite
banks of it.

2. That came from the American

river, did it?

Mr Cablin. I object to that question as leading.

Mr. Cadwalader Well, where did it come from?

A. I can only state that it came with the water from the overflow of the river that was carried in these breaks and when the water went down this sand was left there.

Q. American river water?

A. I suppose so. It came directly across from the American river, the main channel. In fact there was no channel on two occasions, no current above the American river in the Sacramento.

Q. When, if at all, did you have another overflow of the American river water?

A. after 1867-8?

Q. Yes Sir A. Well they break that I speak of which came in there - what is known as the Toddhunter break - that was three years ago I think.

That went down first and the American river passed into that and a large amount of sand was deposited there in the rear of my place and on a portion of my place.

2. What kind of sand?

A. It was light sand of rather a whitish color.

2. Did you know the difference between sand and shakers?

A. Yes sir, I know what we call the difference.

2. Do you know how the mining debris is divided into what classes of material?

A. Well, I only know from what I have seen. I have seen what they term shakers in the mountains in different parts where the mining was carried on.

2. Mines in the American?

A. Mines that run into the American, yes sir, above Folsom and up through that section of the country. I have been through there some

2. Since sands up there too

A. It is generally a kind of a reddish mud, or pulverized Earth that settles in those basins or reservoirs there, and we have some of the same character of soil on our lands.

2. What do you mean by after the slickens came down?

A. I mean that we have some of the same character of slickens that I have seen in the mountains on our soil.

2. Since when?

A. Well, since these overflows have occurred.

2. Since 1867? A. Yes.

2. Was your place overflowed by the American river before 1867?

A. It has been overflowed. It was overflowed in 1852-3 and 1861-2.

2. I mean by the American before —

A. (Interrupting) No sir.

2. You were nearly a mile above the mouth of the American.

A. Yes sir.

2. Until 1863, or the latter part of 1862? 300
A. Yes sir

2. State the manner in which the American river comes down after a flood, if you know it after a heavy rain, after a storm, or during a storm

A. Well, it is a very violent stream, rises rapidly, and will rise from ten to twelve or fifteen feet perhaps in as many hours. I have seen it raise twelve feet in six hours and comes down in very heavy swells with great velocity

2. How heavy will the swells be?
A. Well, they would be 4 or five and I have seen six feet apparently rolling right down

2. And how wide?

A. Well, the whole width of the river generally

2. How wide would that be

A. The river as it first rises is generally confined to a portion of the main channel and it cuts away its channel

Cuts away those bars and raises up, and gets up to its banks, and the current gradually straightens clean across, mostly, though meandering to a certain extent, not coming directly, but meandering from one side to the other and the swells occur as it meets any apparent obstacle in the water.

Q. Coming like a big dam?

A. Yes sir, coming like a big dam.

Q. What will that water be bearing?

A. Well, it is generally very heavily charged with mud and debris of some character or another.

Q. What kind of stuff will it be bearing?

Mr. Cablin: I object to this on the ground he has gone over that and the witness has given a very full description of it.

Mr. Cadwalader: I am now talking about what it bears on its surface.

The Court: What it has floating on top of the water?

Mr. Cadwalader Jessen

The Court. And not the Sediment that is supposed to be floating in suspension

Mr. Cadwalader Rosen

A. There is generally all kinds of timber, logs and boards and parts of houses frequently.

2. Any thing that you have known to be in common use in hydraulic mines?

Mr. W. C. Belcher There comes a suggestion again. Let him tell all he knows.

The Court. Tell all that it carries

A. It carries all kind of material in the shape of lumber and blocks, mining blocks and every thing of that kind, and houses sometimes and lumber and logs

Mr. Cadwalader What kind of mining blocks?

A well, the block that is used in the flume for the purpose of protecting boxes. They cut out square blocks

About Eighteen inches wide & 303
thick, to a foot sometimes, Eight-
een inches or two feet square
and about six inches deep or
thick.

Q. How are they made?

A. They are made by sawing
off logs, sawing off so much
of a log, the ends of a log.
We used to catch large num-
ber of them there at the bridge,
piles of them. I have seen
the water covered with them
the whole surface of the water.

Q. They are used as you say
as the pavements of flumes?

A. Yes, in flumes to protect
the bottom of the flumes.

Here the Court took a
recess until 2 o'clock P.M.

In the Superior Court of the
State of California, in and for the
County of Sacramento.

The People of the State of California V.S.	}	Second Day
The Gold Run Ditch and Mining Company		Wednesday Nov 16 th 1881 Afternoon Session

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Wm J Davis
Official
Court Reporter

Testimony
of
John Hoagland

Re. Called for further Examination
Mr Cadwallader Q. Mr Hoagland
I asked you I believe about
the character of the water that
came out of the American
prior and up to the
time of the change, did I not
or did I?

A I believe you did.
Q What did you say it
was?

A Well my first knowledge
of the water, was very clear,
fine clear water, as spring
water almost.

Mr Gatlin I think the Wit-
ness has stated that twice
in response to your questions.
When you did it the second
time I raised an objection.

Mr Cadwallader No this is
stuff coming out of the old

River. Well if you understand in that way - why that is all right.

(To the witness) State whether the blocks. Mining blocks that you spoke of had the appearance of having been used?

A Yes Sir, all of them. Some of them worn out or partly worn out.

Q Was it or was it not a common thing to see them coming out of the American River at every high raise?

A Yes Sir

Q After 1867 when was the next overflow of your place with American River water?

A Well there was no entire overflow until three years ago. Three years ago, I think it was, that the break occurred there.

Q. That would be 1878?

A. 1878. That was the break at the upper end of the town of Washington

Q The American?

A That is below the mouth of the American river.

Q But the American river water ran in there, did it?

A It ran in there, yes Sir.

Q. Leaving about the same kind of deposit?

Mr Gatlin I object to this question as leading. I hope Mr Cadwallader will try and ask some questions that are not leading.

Mr Cadwallader Well, I will try and not ask leading questions.

Q. When was the next time?

A The next time was this last winter.

Q. What was the character of that overflow?

A. Well that swept out over most everything.

Q. What, Sir?

A. I say that overflow went over the tops of the

levee all along until finally there were two large breaks close to my place and in front of my place.

Q. The overflow was from the American?

A. Yes Sir

Q. Running right across — Mr Catlin I object to the question he tells you the overflow was from the American

Mr Cadwallader No. I said from the American, a kind of parenthetical question.

Q. Where was it from?

A. The high water was at that time from the American river coming across in that direction.

Q. For what length of time did it run over your place?

A. Oh. it run over there for three months. I guess more. It went over there until July.

Q. How deep was it?

A. Oh. it must have been

ten feet deep at one time
all over the country there

Q. How wide was the
sheet?

A. Well it extended all over
Clear up to — well away
up above Brytes; that is
not that depth but the
whole country was overflowed
Clear on above, I don't know
how far up the valley,
Clear to Fremont.

Q. How wide was the
sheet? how wide would
that be?

A. How wide a sheet of
water?

Q. Yes sir running from
the American across the
Sacramento on to your land?

A. Well the American water
so far as the current was
concerned was confined prin-
cipally between Brytes place
and Washington.

Q. What distance would that
be from the American river?

A. That would be about

three miles, there was a very heavy current run across ~~the~~ from the American River, taking a little below the American river bridge running almost North for some distance across that bottom, and then through that bottom that emptied out from the Sacramento River about Brytes place on the English break a stiff current went through that way and across the English break, and all the breaks that were between Washington and there were then down and a portion of it running over the levees.

Q. That would require the American river to run for some distance up stream?

A. Yes.

Q. You saw that, did you, with your own eyes?

A. Yes that stream there the current that struck our was a little north of the timber, or through the timber

that is along the north side
 what is known as Wilsons
 Slough, Wilsons Slough up the
 river. And in the river proper
 there was scarcely any cur-
 rent at all above the mouth
 of —

Q. (Intg) What if anything
 did it leave on the west
 shore of the Sacramento?

A. Well it left sand and mostly
 sand white sand.

Q. That was principally
 white sand?

A. Yes. principally white
 sand predominated.

Q. To what depth?

A. Well. Some places seven
 or eight and perhaps ten feet
 from one foot to ten in
 location.

Q. That is the condition of
 it now. isn't it?

A. Yes sir, that is the
 condition of the country
 there now.

Q. About what distance
 from the river is the heaviest

deposit?

A. Well there is a very heavy deposit about a half a mile, or it commences in about four hundred feet, five hundred feet from the bank on my place, and there extends back over what is known as the Podhunter land and Hogden property and a portion of Brytes, Q. Captain Hogdens, just locate that place with reference to some of these streets in Sacramento City running east and west.

A. Captain Hogdens property lies about west of M. Street that I speak of; that is, almost a due line west would run through his property.

Q. West of M?

A. Yes that would go through about the centre of it I think.

Q. What distance would that be from the upper end of the deposit - the lower?

A. Well that would be a distance of on a straight line, perhaps a mile and a half taking a straight line

Q. How high is that deposit with reference to the front lands on the Sacramento to around the immediate margins of the Sacramento east, of it?

A. Well, there was formerly about fifteen feet fall from the margin of the river to that place. That was what we called the "Swag", and it is now filled up in many places, nearly level.

Q. Nearly level?

A. Yes over the bank.

Q. What effect does that deposit of sediment have over the cultivation of the intervening land; that is, the land between this sand collar or sand wave and the river?

A. Well it has had the effect of almost destroying the cultivation of the land

there, There is no land in fact cultivated there between the margin of the river ~~~

Q. (Inty) You have been in Agriculture here for over twenty years. haven't you?

A. Yes, Sir

Q. Are you able to state whether it is possible to grow, or whether or not it is possible to grow anything out of the sand?

A. I think not, There are some few spots of this deposit that is of a different character from the white sand that sometimes will produce pretty well. Take, for instance a mixture of the soil of the bank which flows out in some localities and mixes with the sand it will produce pretty well but take the sand as it comes from and after the overflows are over, if you can plant any vegetation on it in the shape of barley

or wheat. or anything of that kind or any other thing. it will start —

Q. ~~Inty~~ Does this sand grow any trees or plants?

A. I think not it will grow nothing but Willows.

Q. It grows Willows?

A. It grows Willows.

Q. And Cottonwoods?

A. And Cottonwoods. That seems to be the natural element for Willows and Cotton Woods and as soon as the sand makes its appearance out of the water, the next thing is Willows. they come up as thick as they can stand into the sand. and immediately grow.

Q. You have seen the Willows and Cottonwoods growing on that sand?

A. Yes Sir, a very heavy growth.

Q. What direction was the natural drainage of all that land on the west shore of

the Sacramento }

A. ^{well} It was south -
ward in the direction of
what we know as Cache Creek
Slough,

Q. How was it immediately
from the bank?

A. Immediately from the bank
at my place was a little
south west. Then it got into
what is known as the "Swag",
the tules, or ~~lower~~ arm of the
tules that put in back there,
a low swag in the land
and when the water ran
over there it ran into
this deposit. into this
tule and was carried
southward and was discharged
right in the direction of -
well. the general lake it
discharges into is Kings
lake or Big lake. right at
the head of Miners Slough,
that is the head waters
of the slough that enters
and that extends up into
the main basin, then there

is steamboat slough and smaller sloughs that empty into that. These sloughs discharge the water to a very great extent that accumulates in this tule basin.

Q. State if you know the course that this water from the American, after crossing the Sacramento and crossing the West Shore of the Sacramento takes?

A. It takes the southward or a southerly direction,

Q. Does it cross the Sacramento at any other place if so, where?

A. It does, I believe, at high stages of the water, it crosses the Sacramento down about a place known as Hollisters in that direction, it crosses there, it did last year.

Q. Have you seen traces of its crossing the Sacramento?

A. I have seen the effect of it, yes sir.

Q. You have seen the effect

Of it? A. Yes Sir,

Q. You are able to recognize the effect of the American River or this water escaping from the American River over the West Shore?

A. Well, I could only trace the effects of the water that did come in that direction. It came across just above a place known as Whitecombs ranch. Johnsons ranch and from there to Hollisters and below that to Courtland.

Q. How far is Hollisters below Sacramento?

A. They call it eighteen miles by the land?

Q. Eighteen miles?

A. Yes Sir,

Q. What direction would Hollisters be from your place?

A. Well, it would lie a little South east, about South South east.

Q. Did you ever see any traces of the water of this American River water or this

escape water from the American River crossing the Sacramento at any other place lower down?

A. No I have never been any lower down than there for a number of years.

Q. State what effect these floodings from the escape water of the American River has had upon the inhabitation of the west shore of the Sacramento. Say from Brytes place down, and also upon the Cultivation of the country?

A. Well, it has completely discouraged the inhabitants, so far as I know, from any further Cultivation of the land from Brytes down. Bryte is Cultivating his land, but it is under considerable difficulty, Mr Podhunter has abandoned the Cultivation of his tract.

Q. Well, in regard to the Capacity of the lands being inhabited by human beings?

A. There are some spots that are still inhabited and

the people are staying there, others again have vacated entirely,

Q. Well, I mean in a general way has it helped or hurt

A. It has been injurious to the whole population there very much so.

Q. That is as to the inhospitability

A. Yes Sir, no doubt of that

Q. How in regard to it being dangerous to residents during the winter season—

A. Well a great many of them generally moved, when the danger comes they get away—

Q. Well, I mean you have seen houses and fences and barns Mr Catlin Let him state what he has seen?

Mr Cadwallader (Continuing) And such things.

A. I don't think there is any spot on the Sacramento river west of the Sacramento river but what is in danger, not a place.

Q. What is the character of the soil of the margin of the Sacramento river, from say Boytes place down to

to the head of Steamboat Slough.

A. It has been Considered very excellent Soil, no better any where.

Q. Among soils how does it rate?

A. It has always ranked the best in the state.

Q. What name would you give to it?

A. I would call it the finest Orchard land in the state for one thing and for general agricultural purposes, not perhaps for grain growing, because it is Confined to too small a slip, but for any production in the shape of orchards, fruit or vegetable such as raising potatoes.

Q. (Interrupting) How many crops could you grow a year there?

A. Well some kind of crops you could grow two and some three.

Q. I mean on an average annually, between 1850 when you first knew the country and 1863 when the American river first commenced discharging this detritus about how many crops could you raise.

A. That is how many average failures to raise?

Q. Yes

A. Well we never failed to raise a crop on our place from the time we settled there in 1851 until 1867-68 during our first Cultivation there we raised on our lowest land from 1853 up to 1862 without any levee, raised wheat and barley,

Q. Now give us an Idea of the yield of wheat and barley?

A. Oh. We raised as high as fifty bushels of wheat to the acre then and barley more. and our neighbors done the same thing up and down the river during those years.

Q. Well, on that strip of land there?

A. I am speaking of the strip of land taking the whole strip, most every farmer in the early times raised some grain on his farm but confined their operations principally to raising vegetables and fruit.

Q. Was it or not considered too valuable land to raise grain on

A. Yes if the water could be kept off of it

Q. How in regard to being devoted to orchard purposes

A. I think it is the finest orchard land in the world my experience of it is.

Q. Well, now or before 1863? You mean it is the finest orchard land. As it is now or was before?

A. No, I mean as it was, I think it was the land was naturally in its natural condition when we found it, as we found it when we first settled it,

Q. You mean it was expressly adapted?

A. Yes,

Q. To raising orchard fruits

A. Yes Sir

Q. What effect have these overflows from the American land upon that business or upon the trees?

A. Well, it has pretty generally destroyed the orchard business, entirely, There are a few orchards yet that are doing reasonably well

And some kinds of fruit, but the peach
 crop I think as a
 general thing is a total failure ^{stone}
 fruit generally, plums do better; but
 peaches are almost abandoned
 on that side of the river
Mr Catlin we cannot hear what
 you say,

A. I say that some kinds
 of fruit are still raised there
 pears do well,

Q. I understand you to say that
 these orchards down the river between
 here and Steamboat Slough are
 overflowed by the American river?

A. Partially so, He asked me
 the question, how since the overflow
 there, what was the character of the
 orchards that is as I understand
 it.

Mr A.C. Pelcher That is not the
 witnesses statement; that was
 Mr Cadwalladers statement that
 it came from the American.

Mr Catlin I want to see if you
 understand the Counsel; he asked
 you the effect of the overflow on
 the orchards down below here for

twenty five miles from the American river }

A. That is the overflow of the country there,

Q. What river is that that you were speaking of that overflowed down there ?

A. Well, it generally comes in — the overflow takes place

Q. Generally call it the Sacramento river ?

A. Yes sir the Sacramento river and the American in conjunction Mr Cadwallader when this water leaves your place this American river water leaves your place where does it go to ?

A. Well it goes southward down through the basin of the tules

Q. Well, what lands does it cover ?

A. It covers the lands west of the Sacramento river.

Q. Where is the first point that that water escapes into the Sacramento ?

A. Well, if the banks all remained good it would have to escape through

Miners Slough - Steamboat Slough into
Cache Creek Slough

Q. How far is that below your
place

A. Well the head waters are about
twenty five or thirty miles,

Q. Miners Slough empties into the
Sacramento river at the head
of Steamboat Slough don't it?

A. No Miners Slough empties into
Cache Creek Slough.

Q. Into the Cache Creek Slough

A. Yes sir and there are several
smaller sloughs that run out into
Steamboat Slough.

Q. Cache Creek Slough empties
into the Sacramento about a
mile above Rio Vista

A. Yes sir

Q. Very close to a place called
the Hogs Back; have you naviga-
ted the Sacramento since 1854

A. I have been on it frequently
up and down to San Francisco and
back on several occasions, not very
frequently though

Q. Oh, there is one thing I want to
ask you in regard to the American

How high or low was the outlet of the American river at the time the Cut off was made in the winter of 1862 with reference to Sacramento?

A. You mean the new Cut?

Q. Yes sir

A. How high was it above the surface of the Sacramento?

Q. No. How high or low was it?

The Court What was the elevation of the bottom of the new bed?

Mr Cadwallader. Yes sir. What was the elevation or did it have any elevation above the Sacramento?

A. The new bed had an elevation was left nearly a foot above the level of the Sacramento outlet about a foot I should think - perhaps more than that.

The Court Level of the water in the Sacramento?

A. Yes sir the level of the low water mark.

Mr Cadwallader Q. In other words the new mouth of the American at low water was about one foot above the low water in the Channel

of the Sacramento.

A. Yes Sir I should judge so from the appearance across the river

Q. How much of a fill if any has taken place in that mouth?

A. The mouth of the American river

Q. Yes Sir.

A. Well where the water of the Channel is here (indicating) I think there has been scarcely any - where the water courses sometimes the water is on one side of the river, sometimes it is on the other at low water mark but on each side of the water course there are large banks of sand always deposited, the American river when it gets low is a small stream it only occupies perhaps one fourth of the width of the Channel and then the balance of the Channel or stream is filled with sand and mud,

Q. Well how much?

A. Well I should judge there was seven or eight feet may be ten, There are bars that appear there every year after the water goes down

Q. And how much of the river bed would that fill occupy?

A. Well it is about two thirds if it

Q. After the American river goes down in the spring, what if anything is noticeable each year immediately below its mouth and in the bed of the Sacramento river?

A. Well there is noticeable a large bar of sand and mud extending from the east side down to the Sacramento bridge

Q. How far have you known that bar to go down?

A. Well, about a little below the bridge in some years, its first appearance a little below the west end of the bridge.

Mr Gatlin The east end you mean, your speaking of the bar on the east side of the river are you not?

Mr Badwallader Yes the American river bar,

Q. State if you have known: that since 1863 to cut off navigation between the river and the pioneer mills and the old gas works?

A. Yes frequently, most every year

Q. How long would that bar be? how wide and how high?

A. Well it would be nearly a mile long and perhaps across its widest point; Well five or six hundred feet, perhaps more.

Q. Five or six hundred feet wide?

A. Yes.

Q. And how deep?

A. Well it would fill up the whole bed of the river and be five or six feet below low water mark.

Q. What would become of that bar during the succeeding high water?

A. Well when the water first commenced to run out of the American river it frequently strikes on the West shore meanders back and cuts off that bar, carries it off down stream, when the water first comes through it always cuts up this bar more or less. Whether it takes it all out more or less after it gets up so as to cover it I couldn't say.

Q. As to the Sacramento river it would be somewhat in bend wouldn't it?

A. Yes.

Q And in the bend the Current of the river always makes its self more manifest.

A. The effect - on some occasions last year for instance the American river when it got low discharged on the north side entered the Sacramento River on the north side of the American river stream close up to the shore. The large bar extended then on the east side two thirds of the way across the river. More perhaps, and the water then turned and came down on the west side along the shore there. Meandered across from the point where the span was put in directly to ^{the} east side of Sacramento bridge or a little below leaving the bar on the east of that point extending clear down to Sacramento bridge. This year the water after the water went down - the stream is on the east side and these sand bars were on the north and west sides of the American river and the stream has - the water turns around and the water comes down and cuts out more of these bars.

Q. Well how much of a bar is visible there today under the lips of the American river?

A. Well, it extends down from the American river to the pioneer mills,

Q. How high is the Crest of that bar with reference to the east bank of the Sacramento river?

A. Well, I think about the least there is perhaps seven or eight feet, I judge merely from looking across, seven or eight feet above the top of the bar.

Q. I mean the present bank?

A. Yes I mean the present bank.

Q. I have not asked you the question that I will now whether or not the old mouth of the American river is not completely filled up?

A. Yes Sir.

Q. The Judge going there would not see anything to indicate that there had once been a water channel there?

A. Yes Sir. No evidence of any channel ever being there at the present

time, There was a little slough on the north side a little drainage slough that came out of there for a little while, a small bridge across it.

Q. State if you know how the current of the Sacramento river handles or manages this sedimentary matter with reference to the banks of the stream?

A. I don't know as I understand your question exactly.

Q. State if you ever observed any particular manner which the Sacramento has in disposing of this sedimentary matter?

A. That is the water acting upon it.

Q. Yes the water acting upon it.

A. Well, I have observed the sand passing out of the river over the river banks by the action of the water. The sand the heavier portion of it seems to move along the bottom or near the bottom and it plows its self up in this form ~~showing~~ throwing it the edges from the center and you can see the sand passing over the edge of the

banks very distinctly in large quantities. Sometimes, where the stream is comparatively, gets low and clear you will see it just scooping up in this way and passing over the banks [showing]

Q. And in order to discover the flow of the heavy sand you have got to go near the bottom of the river?

A. Yes sir the bottom of the Channel, the current whatever it is.

Q. So you how much of the river Channel above the bridge this American bar for the last ten years has occupied? that is how much of the bed proper of the Sacramento, the whole bed?

A. From bank to bank?

Q. Yes sir.

A. Well occupies I think more than one half the width, It occupies all of the old original bed. All of the original bed, that is the width.

Q. What is this bar that you see here now composed of?

A. Well it is composed of a sand some what we call sediment or some of it mostly white sand though

Q. Do you know what shingle is? I will ask you what is the character of the sand on that bar this year with reference to the sand on bars of previous years in the same place?

A. I think it is the same character so far as I observed.

Q. Do you know whether it is heavier or lighter?

A. I think it is about the same material as far as I can judge it varies a little, some places it is heavier sand some places lighter, some sediment. The spots of it seems to be of a little different character.

Q. You were on that little bridge for ten years were you not?

A. Nearly ten years.

Q. And you say this sand bar did extend down below the bridge?

A. ^{Yes} Sometimes and sometimes it did not, but generally down to the bridge in front of the pioneer mills; most of them.

Q. Have you ever seen steamers at work trying to cut off the tail of the bar?

A. Yes sir.

Q. In what years?

A. Well most every year they do that at the pioneer mills.

Q. For what purpose?

A. Well for the purpose of making a landing, for a large number bridge since I have been on the bridge this bar has occurred so as to cut off communication by the water, when the water would get down ten feet, twelve feet above low water mark, then they would get those steamers in there when they wanted to land and moor them there, fasten them and set them going with the wheels move them up and down in order to stir up the mud in order to clear out the channel.
Mr Catlin what place?

A. Pioneer mills in front of the pioneer mills.

Mr Cadwallader and the gas works?

A. Yes sir, down to the pioneer mills, The old gas works land has long since been destroyed.

Q. How often since 1863 have you seen communication cut off entirely with the gas works wharf, by this bar?

A. Well it has been cut off entirely for a number of years, I don't exactly know when, about 1866 I think that they didn't attempt to land there at all, after the water fell twelve or fifteen feet below low water mark.

Q. You have spoken of a bar on the west side of the river, how far did that commence below the bridge

A. Well there were several years that it commenced right at the draw there so that boats could not get through. had quite a time, boats there, frequently got stuck fast there,

Q. That is the bar on the other side

A. Yes sir that is the bar extending up to the bridge

Q. What year would that be?

A. Well for the last three years that I was on the bridge there was trouble every low water with those bars about getting boats through I think it is four years we had that trouble.

Q. Well what years would that be?

A. Lets us see it would be along about

1874-5 along through 6, 7, 8

Q. Now how far did that bar extend down the west shore?

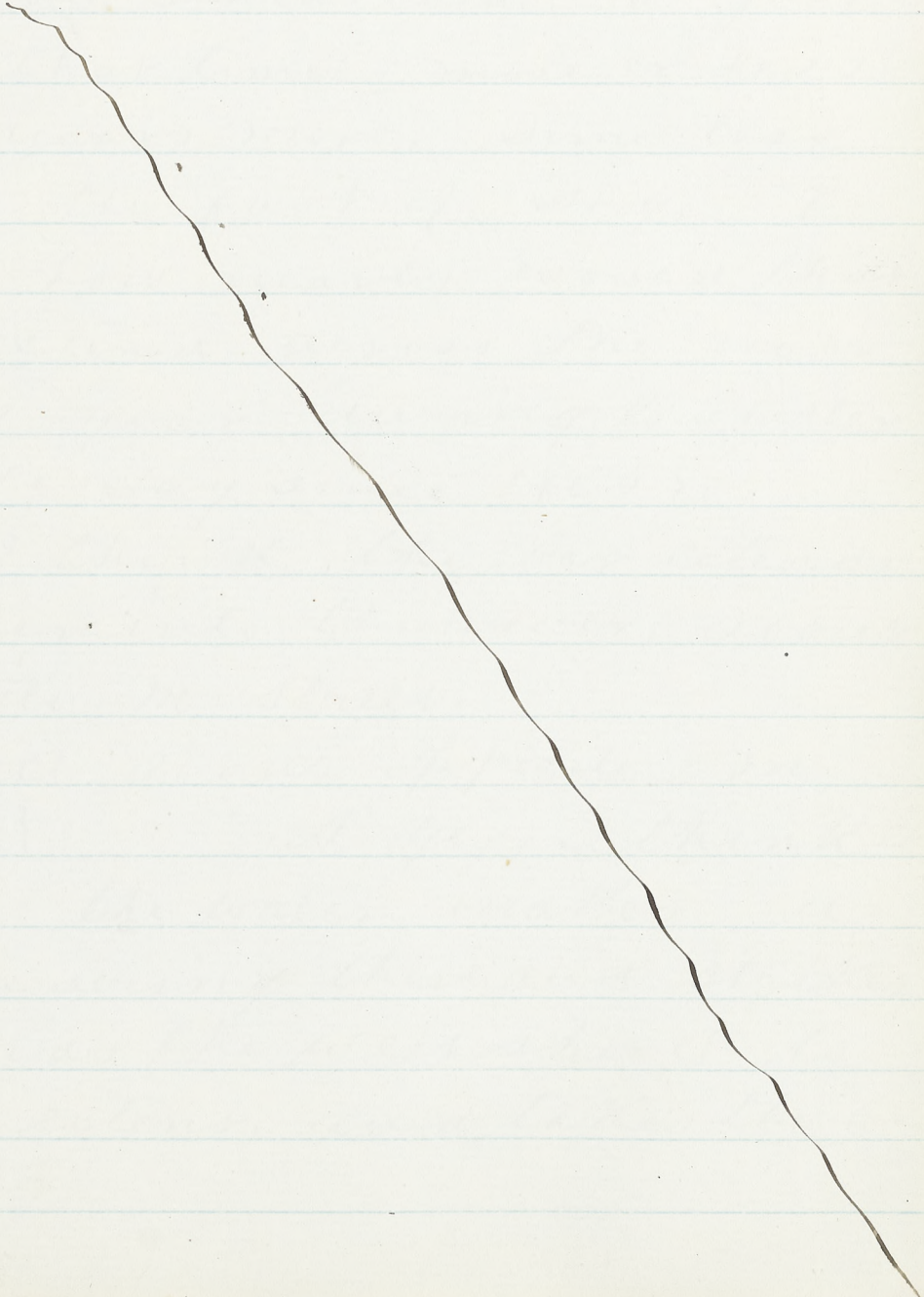
A. Well it extended down I think away down nearly opposite R Street.

Q. How far would that be?

A. That would be perhaps over a mile,

Q. That would be a mile?

A. Nearly a mile I should think.



Q. How much of the bed of the Sacramento river would that bar usurp? A. That bar occupies, I think nearly half the bed now. so that steamers could not pass it.

Q. How long has that bar been there? A. It has been there most every year since 1865-66.

Q. Come since then? A. Yes; about that time; more or less some years more, some less

Q. At the foot of, say, P Street how nearly would that bar extend across the river every year during low water mark; say since 1865?

A. I think the bar extends further into the river, about opposite M Street.

Q. Well about opposite M Street?

A. Yes, I think the bar — the water makes a meandering there and strikes towards the west shore, to some extent, and takes the bar over.

Q. How does the Material in the bar compare with the Material in this American River bar,³ A. I think it is about the same, so far as I have seen,

Q. You think it is about the same thing? A. Yes sir, There is quite a deposit of it all along the shore in front of Reeds place, there and in front of Washington.

Q. Do you know of a wing dam being put in the Sacramento river at any time starting from the Gold shore say, at a point on it corresponding with the foot of I Street? A. Yes! I know of a wing dam there.

Q. What was that put there for? A. It was put for the purpose of throwing the current further down clearing out a bar that forms at R Street.

Q. Well far improving navigation? A. Yes sir

Q, well what was the state of navigation at that time?

A. Well, the state of navigation at that time, was, that the steamers were not able to get up above R street

Q, Before that time where had the steamers been in the habit of coming and discharging their cargoes? A. Well at K street, and all along well up as far as J street; up to the bridge, in fact,

Q, How far did this wing dam extend across the Sacra Mento, river? A. I think 400 feet I am not quite certain — four or five hundred feet, It runs down stream, It is not straight across, It is an angle of about 45 degrees down stream, from the shore,

Mr Catlin about 400 feet in length; ^{A. Yes.} ~~but not across~~ in length; but not across the stream.

Mr Cadwallader, That was

the means of concentrating the water so as to cut the bar out } A. Yes that was the object of it.

Q. Did you see steamers stuck down there?

A. Yes, I saw steamers there.

Q. How long? A. Well they stopped there. They didnt pretend to come up any higher than that at all. They were not landing there for quite a while, I dont know but during the low water.

Q. Do you know the class of boats that are now navigating the sacramento river?

A. You mean as to their size and capacity?

Q. Yes, as to there draft?

A. No, I dont know what their draft is particularly

Q. Do you know how they compare with the steamers that came here in early times, such as the senator and new world, and the Confidence?

A. Well, I dont think they

drew as much water as the new world did - any of them
Q. Chrysopolis - Antelope ?

A. Those steamers are built on a different plan. They don't draw as much water as the New World and Antelope

Q. Well comparatively how much did they draw ?

A. I suppose those steamers when loaded, would draw about not over $3\frac{1}{2}$ or 4 feet of water

Mr Hart Which steamers ?

A. Although I am not posted on that matter at all.

Mr Cadwallader You mean the steamers now navigating the river ?

A. Yes

Q. What ones do you refer to ?

A. Well, I refer to these that are used by the San Joaquin and those that are used by the navigation Co.

Q. By the railroad Company and the San Joaquin Company ?

A. Yes.

Q. Those are the only two

Companies that are running
 steamers regularly? A. Yes sir.
 There are freight Steamers on
 but these generally draw less
 water; not over $2\frac{1}{2}$ or three
 feet. Not any of them over
 three feet, that I know of

Q. What is your idea
 of the impairment or the fill
 in the bed of the Sacramento
 river, say from below the
 mouth of the American?
 Say from 1863? the fill in the
 bed and on the banks?

A. Well I suppose take it
 on a general average that my
 observation would - I should
 think that it is filled up
 five to six feet; not all over
 the bed, but many places
 more than that, There was
 always a channel, but that
 channel was not always in
 the same place, Sometimes the
 channel is a deep channel in
 one place! Sometimes on the
 other side, There may be a
 channel - it is probably

not filled up as much as that; but we found in driving piles around the bridge there, that there was about five feet — four and five feet fill from the old piles.

Q. The old piles were cut off. I suppose at low water mark? A. There were some places, about where the Channel went through the bridge, that the old piles were visible other places again they were not.

Q. Well I mean generally down through the Sacramento

A. Yes

Q. As far as your knowledge goes? A. That would be the knowledge I would have of it; about the knowledge I would have of it.

Q. How in regard to the fill on the banks?

A. In regard to the fill on the banks, it has been much greater than that there on the gold side, It fills

up on the Yolo side, from above the bridge four or five hundred feet above the bridge, it has filled and down past — away past Reeds place; the distance of nearly two miles; it has filled up, a bar has formed there and filled up almost to the natural bank, there it slopes off perhaps an average of 150 feet, 200 feet in some places,

Q. Well as you go down the river } A. I mean as we go down the river,

Q. Well keep in going down. Would you observe that same phenomenon? A. Yes wherever the river meanders from one side to the other, it always or the eddy leaves a bar and on that bar comes the willow, and that remains, as the river meanders from one side to the other it creates still water or slack water, a bar forms. a deposit

takes place, and on that comes the willow, and there it remains all the way down I believe that is about as far as I have seen, all down the river, as far, at least as Steamboat Slough to a greater or less extent.

Q. How is it in Steamboat Slough? A. Well I don't know, I have not been there for a number of years.

Q. Well when were you there last? A. I have not been there for 12 or 15 years, in the day time, I have been there in the night not in the day time, It is sometime since I have seen that in the day time.

Q. How does the size of the present boats running in the river compare, say, with the Chrysepolis and the Antelope?

A. You mean as to size?

Q. Yes sir. A. Well the Antelope was a different, sharp keeled boat, different built,

boat and I think drew much more water than the boats do now, I don't know, The Chrysopolis was a much larger capacity for carrying than the Antelope was,

Q. How is the senator?

A. The senator was a larger boat than ^{than} the Antelope and built something after the same plan, I think it drew more water than the Antelope did.

Q. Do you know whether all the early steamers that came to this city were or were not ocean steamers?

A. I think they came around that way.

Q. All came around Cape Horn?

A. Yes sir or came around through the straits,

Q. Would you recollect them by name? the senator; the McKim?

A. Yes,

Q. The new World? A. Senator, and New World, and Antelope

Q. Wilson & Hunt?

A. Wilson & Hunt,

member Q. West point? A. I don't
the west point, I
don't think she ran —

Q. The McKim. Do you remember
her? A. Well the McKim was
a smaller boat.

Q. She was an ocean propeller
was she not? A. Yes

Q. You recollect her?

A. I believe I do.

Q. The Senator is the same
Senator that is now running
between — A. It runs around
up the Coast.

Mr Gatlin Do you know whether
it is or not? A. I don't know
only from what —

Q. Mr Cadwallader informs you
it is so — but do you know it?

A. I don't know it is the
same — but I have understood
from general information that is
the same boat that was running
there.

Mr Cadwallader, Q. Do you know
anything about a schooner being
stranded along the Sacramento
River on a bar opposite T.

Street at Sacramento City and
Compelled to remain until the
following winter to get off, about
the year 1868? A. I don't
think I have any recollection
of that, if I did know it
I have forgotten it, I think
not, I don't remember it.

Q. How much narrower is
the Channel of the Sacramento
river opposite, say, J Street,
than it was when you
first knew it? I mean, how
much narrower is it from
shore to shore? A. You mean
at low water mark?

Q. Yes Sir, A. Well the
Sacramento River is about
800 feet wide from bank to bank
and perhaps 150 feet narrower,
taking from opposite to K.
Street to Washington; I think
there is about 100 feet of
bar there, in sight from the
natural bank out. There may
be more. Then there is a
bar sometimes visible that
is out a little further

a kind of small bar that is out with the water running around it. It looks like a bar extending out into the river.

Q. Now, I will ask you this: what effect, if any did the early overflows of the Sacramento River below across the river, say Brytes place - have upon the Cultivation of the margins of those streams prior to the year 1863?

A. Well we never experienced any great damage from them we always raised a crop every year without levees at all. From the time I settled there, until 1862 and in fact up to 1867 - for in 1862 we had as fine a crop as we ever had.

Q. Did it interfere with the planting or the growth of any profitable crops?

A. I think not.

Q. Did it interfere with the growth of any of the trees?

A Well there were some localities that were low that were affected some.

Q. I mean, as a general thing

A. As a general thing, it did not. At that time the banks were high. There was a fall of about fifteen feet on an average from the west bank of the Sacramento river to the swag of the tules, when the waters came over the banks it flowed off immediately and drained off into this tule, and remained a very short time in high land. 1862 was the highest water we had, and it only remained on a portion of my place, and that was a general average, about two weeks and where it went off it immediately drained back and passed off down through the tules, leaving the ground in a very short time dry and fit for cultivation.

Q. When were the orchards

planted on that shore } between
 what years } A. Well I
 commenced mine in 1851! Con-
 tinued on until it was all
 planted, I had there in about
 1854; my brother and I
 had about 3000 trees there,
 Mr Bell commenced his about
 the same time and Reeds a
 little later,

Q. Well did the water, up
 to 1863 have any effect
 upon you? A. Not upon
 the orchards; very little, at
 least,

Q. What became of your
 orchard? A. My orchard
 was destroyed in 1868. 7 and 8
 Q. What? A. It was
 destroyed entirely!

Q. 1868. } A. 1868. Yes.

Q. Your sister had a place
 didn't she? A. Yes.

Q. That adjoins it?

A. That joins me.

Q. I will ask you generally
 if the other side make no
 objection to it, whether the same

things took place on her place
as did on yours } A. Yes sir
Mr Cadwallader, Any objection
to that?

Mr Gatlin I will make my
objections known

Mr Cadwallader, Q. Would an
overflow of the river in
early times abrade the banks?
that is; cut them?

A. Very little. There were
certain points along the bank
where sloughs formed; not
very deep though - that led
our back. The waters came
through those sloughs generally
first, and there was a
growth of lumber on the banks
all the way along, and most
all the banks west of the
Sacramento river.

Q. Taking the years from
1850 when you first went
there, till 1863 was there any
trouble from water, or from
sand or either the planting,
the growing or the harvesting
season? A. Very little.

There were some places where the land was lower; they suffered some from the water remaining on too long, as a general thing all along the bank, the water remained on it but a short time. That was before any levees were built.

Q. Until this detritus or sand, sedimentary matter came on to your place, 1867, had you ever seen any of that stuff before, as a part of the valley? A. I have seen that through the mountains similar substance,

Q. Where,? A. Well, up through different reservoirs in the mountains up above Folsom, and on up through that section of country,

Q. on the American river?

A. Yes.

Q. You never tried growing any thing in this sand did you?

A. Yes. I have tried growing,

Q. Did you succeed?

A. As a general thing where the sand is on the original soil but light, a few inches, and mix that with the original soil, and it will do very well. But where the sand is very deep, we never succeed in growing anything

Q. It must be so deep but that it can be reached with a plow share?

A. Yes sir, If you can't mix it with the original soil it is a failure so far as growing anything on it but willows and Cotton Woods

Q. In your opinion is this growth of willows and Cotton Wood inseparable —

A. I think so.

Q. [Contg] From this deposit of sand?

A. I think just as sure as the sand comes the willow comes and it is the first thing that appears after the water goes off, in the sand, is the willows and Cotton wood

Q. How rapidly will those Willows and Cotton woods grow?

A. Oh, they grow very rapidly.

Q. How rapidly? A. There are some on my place that have grown this year, I think, four feet.

Q. As well the soil could not be used for any other purpose without first grubbing? A. Without taking those out and they are very hard to kill after they get rooted, very hard to kill out,

Q. And how much will the grubbing cost?

A. I couldn't state that, because that thing has never been done, we don't pretend to grub them, let them alone.

The Court Is there any occasion to go so minutely into all these matters? I don't see the drift of it I do not see the bearing

Of this minuteness in the testimony.

Mr Cadwallader He states that inseparably associated with this sand is the willows and Cottonwood seed.

The Court I suppose it is a detriment; but we need not go into it to see how much an acre it would cost.

Mr Cadwallader Q. You stated the general configuration of the body of land that holds the Sacramento river is something like a flume didn't you?

Mr W E Belcher He has not stated any such thing as that.

Mr Catlin That is the first I have heard of it.

Mr Cadwallader In other words, you said there was a slope from the immediate margin of the Sacramento river, back towards the tule about fifteen feet.

A. Yes Sir that was the Original Condition of things before the sand came in

Q. And that is observable on both sides of the river }

Mr Gatlin Ask him whether it is or not.

Mr Cadwallader Q Well, is that phenomenon observable on both sides of the river }

A. It is to a certain extent, I don't know the exact fall there is on the Sacramento side, but on the Yolo side, that is what the survey shows on that side. The Sacramento side did the same thing to a certain extent, but whether that was to the extent of 15 feet or not, all along -

Q. Where do you find the highest land }

A. on the margin of the river

Q. On the margins of the river }

A. Yes.

Cross Examination
of

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John Hoagland

Mr Catlin

Q. Do you find the highest lands on the margin of the river on the sacramento side?

A. What?

Q. Do you find the highest land on the margin of the river, bank of the river, on the east side of the river, on the side where sacramento City is?

A. I find the bank, of the river, along the bank, the east bank of the river, there is a margin there that is higher than ~~that~~ what we understand is the tule basin, that extends back.

Q. Don't the original soil as it was before there were any levees or any filling in here on the sacramento side gradually rise from the margin of the river out and some on towards Brighton?

A. No. I don't mean that.

I mean the margin of the river was higher than the land in the rear or in the east of it! I am speaking of the bottom lands, of the bottom lands along the river, what you call the bottom lands.

Q. You say this condition you described existed to a certain extent? A Yes! Along the bottom lands

Q. Where is the extent; where are the lands where it does not exist? only to a certain extent? A Well after you got west of the tules you struck higher land, say on the gold side of the Sacramento.

Q. Speaking of the river bottom?

A. I speak of the margin of the river, bottom lands along the river.

Q. The original bank of the Sacramento river on the west side where your house stood is all washed away by the waters so that the channel of the river runs now somewhere

Near where your house stood
on the bank isint it }

A. Yes; where it did stand

Q. So that the bed of the
Sacramento river at that point
has changed by cutting in }

A. Yes.

Q. From year to year more
or less? A. Yes Sir

Q. Till its Channel is now
where the high bank formerly
was on the west side?

A. Yes Sir

Q. And there is a bar left
on the east side opposite to it }

A. The old bed of the
Sacramento river

Q. And that is the bar
you have been describing to
Mr Cadwallader? A. Yes Sir,

Q. That bar ~~stands~~ extends from
near the mouth, the present mouth
the new mouth of the American
river, down to and in front
of the mouth, the old mouth?

A. It extends down to
Sacramento bridge, generally down.
Sometimes under the bridge.

About ^{the} Pioneer Mills.

Q. Do you state the mouth of the old American river?

A. Past the mouth of the old American river some distance down to the Pioneer Mills.

Q. That has been substantially the condition of that bar ever since the water came through that cut hasn't it?

A. Well, for a number of years, I think the bar was not formed there to any extent for two or three of the first years it came through there, the last seven or eight years that has been the condition.

Q. It commenced forming immediately after that?

A. Yes sir it commenced forming.

Q. And has grown to its present size?

A. Yes sir.

Q. By annual accretions ever since?

A. Yes sir.

Q. At times the current of the Sacramento river changes it somewhat; cuts portions of it away, does it not?

A. That is only observable after the water gets down

Q. I am asking you whether that is so as a matter of fact: whether it does?

A. Well, that is as far as my observation goes after the water is down so you can see the bar after the water falls from high water mark down to comparatively low water mark, then the bar is seen and then the action of the water carries a portion of the bar away?

Q. Does it carry a portion of it away when the water is high? A. That may be, so far as I know; carry it all away perhaps

Q. How? A. It may carry it all away so far as anyone would know

Q. You only know when the water subsides—

A. That there is a bar left there.

Q. As it gradually falls down.

You see a bar created there

A. Yes sir.

Q. As the water gets lower the bar shows a larger area

A. Yes sir, sometimes when the water covered it all, it is carried off, cuts away the lower end of it

Q. You have described the American river there is a river very close there called the Sacramento river is there not?

A. Yes Certainly Sacramento River.

Q. How big a river is that? Compared with the American river?

A. A much larger river in volume of water

Q. Isn't it ten times larger in every respect? the Capacity of carrying the water, the amount it discharges?

A. I think it is at low water mark perhaps a great deal larger

Q. Don't it discharge twenty times as much water at low water as the American does?

A. Perhaps it does so far as I know.

Q. Does it discharge fifty times as much water at low water mark during the months of July, August, September and October, a hundred times as much water as the American river? A. I think not.

Q. Well, give us now your best judgement as to the proportion?

A. I would say about three times as large, perhaps, as the general flow of the American river.

Q. You mean that it only carries three times as much water in the summer?

A. About three times, I am speaking along the American river, not of the junction, I am speaking of above.

Q. I am speaking of the Sacramento river! the amount of water that it carries above the mouth of the American before the American gets into it, of course. Doesn't it carry from 50 to one hundred times as much water as the American?

A. At low water, (you mean {

Q. Yes I say low water mark.

A. I don't think it does

Q. Right now at this time when you stand on the Railroad bridge you see the waters of the Sacramento and American unite, do you not?

A. Yes.

Q. Now, if you go on the American river bridge which is opposite twelfth street here -

A. Yes

Q. There you see nothing but the waters of the American

A. Yes

Q. How do they compare?

Don't the water of the Sacramento as much as fifty times?

A. I think the American is a much more rapid stream

Q. [Inty] I am not asking you on that subject at all

Mr Hagland did you understand me to ask you about the rapidity of the stream?

A. Yes that is what I understood you to ask me.

which Carried the most water

Mr Hart That is determined by the rapidity of the stream.

Mr Catlin. Q. You know all these elements; its size, its Current &c } A. The width of one stream is very much larger than the other. The width of the two streams differs very much, but as to the difference in the amount of water they carry it is not so very great because one is a much more rapid stream than the other

Q. I will ask you if the Current of the Sacramento river is not greater at low water mark than the Current of the American river is at the American river bridge }

A. No, I think not. I think the Current is very much more rapid in the American river, There is a stiff current Comes out of the American river all of the time, It is not

perceptible in the Sacramento river at all.

Q. There is not much current in the American river from here, five or six miles out?

A. I am not familiar with the American river up there but at the mouth I am speaking of now: its discharging at the mouth, there is much more current there than there is in any portion of the Sacramento river, that I know of, so much so, that in passing up there in a boat you find very much difference after you get by the mouth of the American river.

Q. You said you thought the mouth of the American river was about a foot higher, that the bed was about a foot higher than the bed of the Sacramento river, that gives it a fall and makes a current?

A. That was ^{the time the} the excavation was made to turn the river.

in there.

Q. You refer to that time?

A. Yes. They left it about a foot higher.

Q. at this time; how is it now?

A. Well, there has been very little wash out of that cut I am told; and to my observation I think it is so. The cut was made across a stiff, heavy clay and they got down to a certain point and then left it calculating that the river would cut itself out. But that has not been the fact. It has remained about the same, with a very little variation since.

Q. Now just state without any further explanation, the comparative of the Sacramento river above its mouth and the American river, the amount of water?

A. Well the width; the general width of the water.

Q. The amount of water?

A. Yes the general width

and amount of water above is considerable. Perhaps it may be ten times as much water; Capacity of water the carrying capacity of the water for floating any vessels or anything of that kind; but there is a very great amount of water that is discharged out of the American river at the present time, for it is very rapid, and it continues so all the time. The stream is so rapid that boats cannot pass up it, scarcely anytime, high or low.

Q. How is that Channel of the American river changed { from the old bed to the new. }

A. It was changed by making an excavation

Q. Under what Authority was that done? A. Done under the Authority of an Act passed by the Legislature in 1862 Creating a Commission known as the Levee Commission of the Sacramento, with power

to straighten or change the 372
Channel of the American River
Q. Have you not always
Considered that the damages
which you have suffered and
you have described here, were
the direct result of that change
in the Channel of the American River?

A. Yes Sir. The Cause of
the destruction of my property
arose in that

Q. That change was made
you say, in 1862-3, suppose
it had been made in 1856
or 1858 would it not have
produced the same effect on
your land? A. I think
it would have destroyed the
bank. Undoubtedly it would
have carried the bank away
the same as it did.

Q. It would have swept
your trees and bank away
and your house the same
wouldn't it? A. I think
it would

Q. You commenced an action
against the Levee Commissioners

to recover of them all the damages which you have suffered by reason of the American river running across the Sacramento river on your land, did you not?

A. Yes sir, I did

Q. now, at the time the American river ~~ran~~^{ran} across there where was the Sacramento river running? A. It wasn't running any where at that time there was no current in the dead water, all above it in fact the American river ran up stream for nearly a mile.

Q. The American river cut right across it? A. Cut right across it.

Q. and stopped that from running? A. Stopped that from running and ran up stream for about a mile.

Q. you didn't mean it stopped it, did you? A. I don't think there was any current in the Sacramento river above the

American river at all. The water of the Sacramento — the bank at my place was about 19 feet I think above low water mark.

Q. I can understand how the American plunging right into the Sacramento river at that time obstructed somewhat the passage of the Sacramento river, but I cannot understand how it would stop it entirely.

A. I am speaking of the current above the American river. There was no current in the Sacramento coming down above the American river at the time this took place.

Q. Did all the water of the American river run over on to your place? A. No. Not all of it, a portion of it, of course ran down the other stream.

Q. Didn't a portion of the Sacramento river run into that at all? A. Yes. The heavier portion. The action of the water

Was like This -

Q. <Inty> Well, both rivers ran over your place, didnt they?

A. There was very little Current at the time this occurred in the Sacramento river.

Q. Didnt both rivers discharge Themselves right across your place, and so on to the tules to the west? A. Oh, a portion of them.

Q. And the portion that didnt pass over your place passed right down the Sacramento - Just answer that question - a portion of the water of the Sacramento river and of the American, combined, passed over your land, and the balance of it passed down the Sacramento river? A. Yes, I suppose so.

Q. You said there were other lands adjoining yours among others you mentioned some belonging to your sister. They were injured in the same way?

J. J. A. That time, yes sir,

Q. By the Combined Waters of the Sacramento and American }

The Current passed very swiftly over your land, I understand you, and cut up the natural soil? A. If I would be

allowed to explain the action of the water there, I would like to do so at this point

Q. Well, answer this question did the waters pass very swiftly over your land and tear up the original soil?

A. Oh, yes; yes.

Q. Well where was that? the bank of the river and the levee?

Mr Codwallader Aint you going to give the witness time for explanation?

Mr Catlin Not now.

Q. The bank of the river and the levee and the original soil; where did that land? where did the river deposit that?

A. That is more than I know

Q. Didnt it leave it in rifts of sand running down

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A. No sir, There was not any evidence of it. There was trees Carried five miles below down into the tules and sand. There was no evidence of any deposit of sand at the time that season anywhere on my place.

Q. Not on your place! it swept your place Clean! but didn't it deposit it on places below you? A. I think there was some little deposit down on the road, about where the bridge was built there, across the road

Q. Where did all that material go to that you say you — A. Well, I don't know, I really don't know what did become of it.

Q. Where would it naturally go? A. It would naturally go into the tules

Q. Have you ever found it in there? A. No, I never found any soil there that looked like that

Q How large were these trees
that were carried five miles?

A. Those large peach trees
some of them—

Q [Inty] There were peach ^{trees}
floated off as far as the water?

A. As far as the water
carried them four or five
miles

Q. Now when was the
you settled on the land
in 1850 when was that first
overflowed by high water?

A. It was first overflowed
in the spring of 1853

Q. Wasnt the water over
some of your land there in
the winter of 1849 & 50?

A. Very little in 1849. The
back part of it had water
on.

Q The back part of it was
overflowed with water, where
did that water come from?

A. Well, it came out of
the rivers and through the sloughs
there were some sloughs it
ran out,

Q. what rivers } name the rivers }

A. The Sacramento River.

Q. The Sacramento river, }

A. I suppose so, The American river ran below me then, The old mouth of the river was a half a mile below,

Q. You were overflowed then partially, and were you not overflowed in the winter of 1851 and 2 also to a certain extent }

A. Oh, no, there was no overflow that year,

Q. no water on any of your land in the winter of 1851 and 2. }

A. No, no water there that year, in 1852 and 3 the spring of 1853 we were overflowed.

Q. In the winter and spring }

A. of 1852 and 3, yes.

Q. The big flood that overflowed ~~flowed~~ whelmed the city here was in December 1852, }

A. 1852. }

We had very little water on us that year until spring spring in april, the water come in april 1853.

Q. In the spring you had high water? A. That went over us.—

Q. [Intg] Didn't that water come from the Sacramento, go over the banks of the Sacramento above you? A. It came from both places: the Sacramento and the American river at very high stages and ran out of its banks and took across the bottom lands now owned by Cox and Clarke, and came out of the sloughs near my place and poured over the banks into the Sacramento, and the overflows came from the joint action of the three rivers as it were. The Feather river come down across to Nicolaus, down across the bottom and ran over this land at about this point, what is known as the Wilson slough; and then the waters coming down the Sacramento, they all joined together at this place about opposite my place, and above it, and

Our water came from that source from all the rivers, at that season, that spring, we had a general overflow

Q. Didn't the water overflow the banks of the Sacramento river on the west side, different points, all the way between your place and Knights Landing?

A. Yes at different points

Q. And ran over there and filled up the tules and made a lake as far as your eye could reach? A. Yes sir in 1853

Q. You have observed Mr Hoagland, that in the spring of the year we have what ~~we~~ call the spring floods after the rains, at least in the valley, have ceased, have you observed those floods?

A. Yes. I noticed that we had generally high water in the spring.

Q. Havnt some of those floods been nearly as high as what we call the regular winter floods? A. Well, we have

had pretty full rivers in the spring frequently.

Q. Haven't these floods overflowed the natural banks of the Sacramento river above you?

A. They never did on me but on occasions I speak of, they went over the banks, some banks.

Q. Above you I say?

A. They went past through some of the sloughs that went out of the river before they were stopped up, by parties; and down below there were some low sloughs, but afterwards, I think after we had the flood of 1853 that those sloughs were pretty generally filled up so that the water had to pass over the —

Q. [Intg] How were they filled up? A. Well the banks there were levees built across them.

Q. They were leveed across?

A. They were leveed across by parties owning the land filling them up.

Q. That was about the first leveeing that was done?

A. That was about the first leveeing that was done we filled up some of the low places along our place.

Q. That had the result of making the water in the river higher during the flood?

A. Of course it made it somewhat higher.

Q. Pumped the water in the river and made it higher? Did not it also have the effect to cause the river to cut into its banks more than it otherwise would?

A. I don't think it would.

Q. Why not if it raised the river higher? Pumping it in more limited space?

A. The higher the river is, the more it draws to the Centre, The deeper the water, the more the force of the water to the Centre as a general thing; makes a deeper Channel,

Q. one of these points where it makes a sharp bend isn't that liable to cut into the bank? A. Unless there is some power or direct angle of the river it generally flows with what you might call a smooth angle. It cushions off from the bank, and runs to the Centre.

Q. You explained in your direct examination that one reason why the early overflows were not so obstructive and were not so extensive that there were numerous sloughs led out from the river into the tules?

A. Yes Sir

Q. The river discharged itself through them? A. Yes

Q. That after those sloughs were dammed up by levees, why then the water became higher, and when there was a break it caused more damage didn't it? A. The effect of that would be that those sloughs

Still remained on land, If
the water ran onto the land
or overflowed, they confined
themselves to those sloughs
and took the Channel out to
the main Channel; that was the
Case on Brytes place and the
lands between those sloughs
would be dry in a very
short time, because the sloughs
would drain them off; that
was the Case in Washington
to some extent. There was a
slough there that carried the
water off, it could not get
over the banks, It concentrated
into this slough or swag
and immediately passed off
into the tules. That was
about the general Character
of the land all the way up
even after these little banks
were put across these sloughs
in early times, it didn't
amount to much because if
the water got up so it
would run over those, or
even with the top of the

Natural bank why, they soon washed out and were gone.

Q. Didn't those early floods frequently go over, and most usually go over the natural banks of the river? in many places?

A. 1853 and 1861 and 2; there is the only floods we had in early times, after that we have had.

Q. Are you speaking of 1851 or 1861? A. In 1853 we had a flood, and then in 1861 and 2 were the general floods that we had up to that time, that done us any.

Q. (Inty) These floods went over? A. Went over the natural banks; those floods did.

Mr Hart I didn't understand the witness, what time did you say those were the only floods? A. In 1853 and 1861 and 2.

Q. The only floods you

had up to what time, did you say? A. From the time we settled there up to 1862 those were the only two floods that flowed over the land generally.

Mr Gatlin flowed generally all over the banks?

A. All over the banks.

Q. Did they not, when the water was up, flow over the banks to such an extent that you could only tell where the river was by the line of trees on the bank?

A. Never except on those two occasions, up to that time.

Q. Well, I say on those two occasions? A. Those years you could tell where the banks were very easily, you could see the difference in the elevation of the water. It would be very great. You could wade along the banks.

Q. The water would be very high in the river? There was where the current was

Swiftest } A. Right along the margins of the banks there were roads generally, and perpee in 1862 in the high stage of the water drove stocks up and down the banks when back any distance would have been 10 or 12 feet deep you could very easily distinguish where the bank was.

Q Now, in regard to your description of the track of the American river after it got over into Yolo County. Do you mean to convey the idea that the American river kept up a distinct track? A. I mean that the great rush of water that passed over or my place and above there took a track.

Q. Didn't it go right out into that vast tule lake that was full of water?

A. Yes It made a track right straight down across the Sacramento river, up till just above Hollisters, and down

through the Pierson district and over all those islands into the San Joaquin. That is the track of it.

Q. Didn't the Sacramento river water go ~~through~~ there too?

A. I say the great rush of water passed over there.

Q. What was the great rush of water composed of; the Sacramento and American? { limited? }

A. At that point I suppose. The water rushed over these breaks.

Q. Where you observed the effects of currents of water down the river as far down as Hollisters, or down through the Pierson district you speak of? A. Yes.

Q. Those effects you observed were the effects of the flow of the American river and of the Sacramento river?

A. Yes; the effect of the current that passed —

Q. Wasn't there also some of it the effect of water

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from Putah Creek and Cache Creek
Didn't that get into this basin
too? A. I suppose they
did, Generally those streams
are all —

Q. (Intg) I am asking you
whether this water that went
down there wasn't the united
water of the American river
and of the Sacramento river
and the Putah Creek and
Cache Creek?

A. My answer to that
question was this, that —

Q. Mr Hoagland answer my
question, Didn't the water that
overflowed the people below
there and left marks of its
presence in various forms, drift,
&c weren't those the waters
of the American river and of
the Sacramento river, and Putah
river and Cache Creek Combined?

A. They all Combine in the
tules of course. There is where
they empty.

Q. you say there is nothing
there now to indicate where

the old Channel, of the American was that a stranger could not find it?

A. I don't think that a stranger could find it.

Q. Don't the water run through there at high water?

A. It does in a little slough I think there, is there.

Q. Don't the American river the old bed of the American river, fill right up, and the water come right through there when the water is high, don't it every winter, more or less?

A. I don't think it does. There may be a little slough through there that some water comes through, that accumulates above there.

Q. Don't there a stretch of water across the whole width of the river when the water is high? A. Not across the mouth of it I don't think. There may be above, for all I know, I never observed any water across the mouth

of it, except in a small little slough that I think is about a rod and a half wide or so, water passes over there, I think there is a little bridge across the small -

Q. I am not speaking of the time of low water, I am speaking of during flood periods, } A. Oh, the water this year was all over that Country, all over the island all over everywhere,

Q. I am asking you whether, during floods, when the water is high, the American River does not pass around through its old bed as well? A. It covers the whole Country there. That is what you mean! Covers the whole Country, river bed and all,

Q. Don't it enter into that bed first, before it covers the whole Country? }

A. I don't think it does

Q. Is that no higher than the surrounding Country?

A. It is as high as the adjacent land there, It is Cultivated in gardens, the old bed is,

Q. In some places?

A. Some places. I think it is as high, if not higher than the Johnson ranch. a good portion of it. The Johnson ranch is covered with water about as soon as the old bed is. A little sooner, some portion of it. It flows over all that Country; did last year, all under water.

Q. Now you have described two bars. There is one bar that extends from the mouth of the American river down very nearly, or quite to the bridge that lies on the east side? A. East side.

Q. The American river entering the Sacramento takes a sweep around and runs

Against the opposite bank }
 A. Yes.

Q. The Channel of the river opposite that bar is on the other side! then it passes, after passing the bridge, that Channel passes down and strikes the bank of the Sacramento on this side, does it? } A. Yes.

Q. And leaves a bar on the other side? } A. Yes sir

Q. That is the bar which you have described? } A. Yes sir

Q. As being in front of M Street and it? } A. Yes sir

Q. And P? } A. Yes, that is the bar.

Q. Now the wing dam that was built there, wasn't that built there for the purpose of keeping the Channel on this side of the river? } A. It was built there for the purpose of clearing out the Channel below

Q. I say Keeping the Channel on this side of the river? }

A. Yes, I believe that is the

Object

Q. Keeping it from the Yolo side, where the bar was ?

A. That was the object so far as I know.

Q. Now, Fishermans beach, that was situated on the west side of the Sacramento river from the bridge up to your place, and so on up, wasn't it ?

A. Well it was right at my place.

Q. Wasn't that an old bar in the river ? A. No, very little bar.

Q. What was it ?

A. The bank sloped off there. It appeared to have been an old Indian settlement there in that neighborhood and there was a mountain just above there.

Q. You call it a beach ? wasn't it a bar ?

A. There was a gradual sloping of the beach there, which didn't appear anywhere else.

Q. That was not a bar

but a beach? A. Yes.

Q. What is the difference between a beach and a bar?

A. The only difference that I could draw was that there didn't appear to be any accumulation of sand in the water materially but the bank sloped down gradually into the water.

Q. It was shallow for some distance out? A. Not very far, a short distance out, it shoaled off a little. There had been an old Indian settlement there and it probably had been caused that way, or all events there was a very fine beach there.

Q. Don't you remember that prior to 1862 and 3 - I state the time between 1850 and 1860 - along there the steamers coming up the river used to ground on what was called a sand bar below the City here, three or four miles

Known, I think as Haycocks Shoals. They frequently stuck fast there and had to wait.

Mr Godwallader Ask him a question, whether they did or not, instead of assuming.

A. I am not familiar with that part of the river, I don't know

Mr Gatten Q. Do you know where Haycocks Shoals are?

A. No, I do not.

Q. you have heard of them? A. I have heard of them, but I don't know where they are

Q. you have heard there were such shoals?

A. Yes sir, I think I have.

Q. When did you first hear of them?

A. Well, I don't remember -

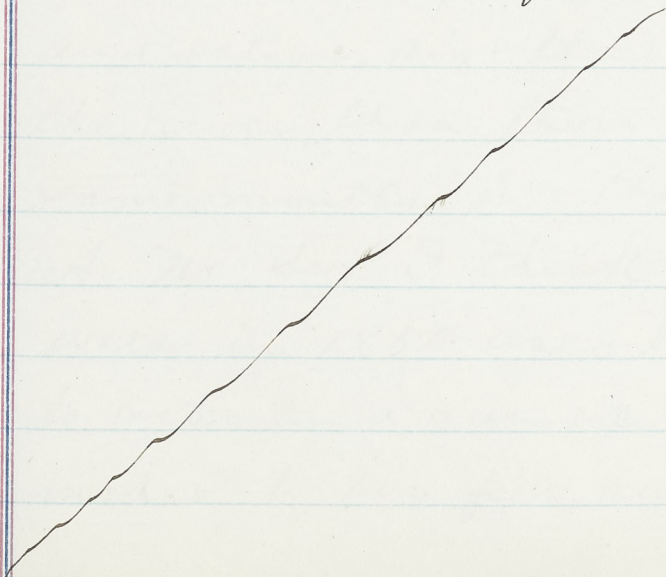
Q. Well are they shoals.

formed by Slickens or
were they Shoals formed
here in early days ?

A. I don't think
that I have ever been
there so as to examine
or know anything about
it to speak - I don't
really know where the
location is at all.
I know there is - I have heard
of there being such a
place, but where it is
I don't know

Q. You have some idea
where it is ?

A. No I don't. I
don't know whether
it is five miles down
the river, or ten -
or twenty



Q Mr Hoagland you were on the Sacramento bridge there as manager or tender of the bridge up to about three years ago

A. Yes sir.

Q. or four years Have you observed that there is more water in the Sacramento river the last few years at the low stage than there was in the fifties.

A. More water?

Q. Yes.

A. No sir nothing near

Q. what?

A. Nothing of the kind. No

Q. Don't there more water in the Sacramento river now in front of this City or I will withdraw that question and I will say a month ago before this rain raised it a little, during the low season say taking August, September and October, ain't there more water in the river than there was during those same months in the fifties?

A. No Sir I think not. The water in 1850 used to rise, the tide used to rise and run up shore from twenty inches to two feet, run right up shore.

from the whole width of the river on up to, as far as the ~~60~~ sixties

Q. The fact of the tide rising would not determine that much?

A. The river was much deeper and much more water in it all from bank to bank than there is now I should say ~~so~~ much again.

Q. What do you suppose should cause there being less water? you say there was a great deal more then than there is now?

A. Because the river channel was deeper.

Q. I am speaking of the amount of water?

A. Passing through?

Q. Yes.

A. Oh, you speak of the amount of water that is passing through the river

Q. Why certainly that is what I am talking about?

A. Oh there may be as much water passing

Q. Aint there more in your judgement

A I don't think there is any more there may be the same quantity as far as the carrying capacity of the river

of water is concerned, it may carry a 401
much water now as it did then
but the amount of water that is
remaining in the river as to quantity is
very much less now than it was
then.

Q. The amount you say?

A. I mean the amount of water that
is the cubic yards of water from shore to
shore was much greater in 1850 than it
is now

Q. Then you think the carrying capacity
is the same now as it was then.

A. There may be as much water pass
down the river now as it did then

Q. There is a much more rapid current
now than there was in 1851?

A. I think perhaps the current is
more rapid now than it was then because
we had a very stiff current up shore at
tides than inland

Mr Cadwallader you said you had
a very swift current up?

A. Well there was quite a current
every tide, when the tide used to rise
and fall here from eighteen inches to two
feet, quite a current in shore not much
in the center, but into shore there was a stiff
current

The river was full of water from shore 402
to shore; there were no bars or impediments
of any kind.

Mr Catlin Q. Since the time when the
American river first broke through on
the other side by reason of that change
in the bed of the river, I will ask you
whether the floods, the overflows
at that point since that time have
not mainly resulted from that
change in the bed of the river?

A. No, I think not particularly
so.

Q. Don't it produce the same cause
now that it did when it first went
through there; hasn't it broken through
there frequently since?

A. Well in 1868 after the railroad
was turned into Washington the
Railroad Company and others built
a large levee there, what we considered
a very strong levee.

Q. Didn't this break through
your levee?

A. It broke through that levee
a portion of it, about three years ago
that was below the mouth of the
American river and two years ago

it went through above nearly opposite,
A little above the mouth of the American
river, what is known as the Todd
river, but it didn't go directly over
my place.

Q. What caused those breaks there
then?

A. Well the water was high

Q. In which river was it high?

A. I think the water was highest
in the American river, the time the
break took place

Q. If the American river had been
running down through its old bed here
entering near the Gasworks, those levees
up there would not have broken would
they?

A. I don't think they would have
been so apt to break

Q. Then those breaks that have
occurred since that time are due to
that changing the mouth of the American
river, are they not?

A. It is very hard to determine, the
water comes down there and at that
point and just at the junction of the two
rivers.

Q. Is it hard to answer my question

do you mean?

A. What?

Q. You mean it is hard to answer the question?

A. Yes I can't understand how I can answer a question in that way

Q. I will get at it differently, above the bridge on the west side how far is it to the first break in the levee?

A. On our side?

Q. Yes.

A. The first break in the levee at the present time?

Q. Yes.

A. Oh it is about five hundred feet.

Q. Well that has been open all summer hasn't it?

A. Yes sir

Q. No attempt to repair it?

A. No, That has been open all summer

Q. And when the sacramento rises the water will go through there won't it?

A. Yes, or the American. When either of the rivers rises the water will go through there.

Q. Now how far above that break

is there another break?

A. There is another break about lets see six or seven, eight hundred feet above that again; that is a large one, there is one or two smaller ones between.

Q. One or two smaller ones between and about eight hundred feet above there is a larger one?

A. Yes sir, that is what they call the Todhunter break.

Q. How large a break is that up and down along the bank of the river?

A. That is about two hundred feet, let me see, between two and three hundred feet.

Q. Has that been repaired?

A. No sir

Q. Now why do they leave those open? why dont they repair those levees, isnt it because the american river coming right through as it does through its new mouth is bound to tear them away again?

A. Not necessarily so if they are made large enough

Q. Well why dont they repair them

A. Because the land is not worth repairing them; because the land

Can't stand it, isn't able to do it

Q. That is the reason is it?

A. That is the reason sir.

Q. Isn't one of the reasons that they would be very likely to be carried away by the current of the American river striking against them?

A. Nothing more than any other place particularly.

Q. Nothing more than any other place?

A. No sir

Q. The American river impinges on the bank of there at those places?

A. There is a large margin on the outside, about four hundred feet in front of where the levee was built and it would be only a question of height as long as the outside bank stands, If the American river carries away as it will inevitably do in the course of time carry away the entire bank if it should reach the lines of the levee, it will undermine and take away the levee as long as the outside bank remains the levee could be built at that point as well as at any other point. It is a mere question of height on one side and the amount of

Money to do it on the other

Q. When you get above the Podhunter break do you come to another one pretty soon?

A. Not until you get up to the English break,

Q. Is that a very large break?

A. Well that is where the brush dam was built; you know?

Q. I asked, whether it was a very large break?

A. Let me see, about exactly the width of that, I believe it is six hundred feet across the dam,

Q. Carried away for six hundred feet. Has that been repaired?

A. Well the dam is there yet, the same as it was last year, and the bank has been repaired.

Q. They are rebuilding that levee?

A. They have rebuilt the bank on this side up to the dam that is on Brytes place

Q. For the purpose of stopping the Sacramento river from going through there?

A. Yes, or the water from going through there from any source.

Q. The mouth of the American could hardly get up there?

A The American runs across there
 and last year and did most every year
 right across that bottom and comes out
 of that point and is high

Q. The American

A. Yes

Q. Long before the American gets
 high?

Mr Cadwallader The American river
 water goes there?

A. Yes Sir.

Mr Catlin. Overflow.

A. Yes sir goes across what is known
 as Cox and Clarkes place

Q. Doesn't the Sacramento river
 also flow through there?

A. It all flows through there when
 the water is high, but the American flowed
 through there last year

Q. Why do they repair that?

A. Because that belongs to Mr Bryte
 and he repaired it, I believe at
 his own expense

Q. Did they repair it because they
 expected it would save land from
 inundation?

A. Protect them, yes sir.

Q. From the Sacramento — on another

Subject Mr Hoagland, I will ask you 409
whether in your judgement and from your observation
the building of levees on the Sacramento
river below here, below Sacramento, down
as far as Steamboat slough, and down there has
not had the effect to make the floods,
the water higher in the river here?
A I think so, Yes Sir,

Q, Just explain the effect of the rise
of the water here, they dam the river
back don't they?

A Do you mean the effect since
the rivers have been leveed, or before it?

Q. Yes since these large levees
have been built on the Sacramento river
don't they have the effect to back the
water of the Sacramento river up?

A. Well I couldn't say that they
do have that effect, that is not
a settled question in my mind
whether they do or do not.

Q. Isn't that your opinion?
and the general opinion of the proprietors
of land along the margins of rivers?

A. I am not settled in my mind
whether the rivers couldn't be leveed and
caused to carry their water that comes down?
The question whether they are deep enough to

scour the bottoms or the Carrying Capacities of the river as to elevation - The elevation of the Water creates a stronger Current and creates a capacity to carry the water, I have some doubt whether it backs up the Water any at all or not so far as I am concerned.

Q Isnt one of the reasons why the floods of later years have been higher along the sacramento river because of these levees built upon the river at various places below here.

A. I think not if the river ^{were} beds ~~x~~ where they formerly were, deep as they formerly were and the Carrying Capacity of the river with those levees on them would be so much greater than what they are without the banks that the water could be discharged and Carried. That is the theory we went upon while I was investigating that subject and it was the opinion of all our best Engineers that we had

on that subject that it could be done and I think that is my opinion of it, that all those breaks that took place are merely cross currents that took place and in effect destroyed the carrying capacity of the river, if it was confined between banks —

Q. (Inty) The new mouth of the American River, how wide is it compared with the old bed of the river?

A. How wide was the new mouth?

Q. Yes.

A. Well I would only speak of it comparatively. I suppose it was about perhaps six hundred feet, five or six hundred feet.

Q. Well, how was that mouth formed, what was it that cut it away?

A. What was it that cut away the mouth?

Q. Yes what formed that

New Channel There ?

A. Why they excavated it, excavated a bank,

Q. Wasnt a great part formed by the cutting of a Channel by the water itself ?

A. Oh no I dont think the channel has ever been cut by the water scarcely any not perceptibly.

Q. Do you say that was all dug out ?

A. Yes sir

Q. In the shape of a Canal ?

A. Dug out in the shape of a Canal.

Q. Where was the material placed that came out of it ?

A. - A portion was put up on the banks and a portion of it I think was dumped in the river.

Q. That was put out on on the bank, what has become of that material ?

A. I dont know what has become of that.

Q. Hasnt it been washed -

A. [Intg] Perhaps some of 413
it has

Q. I saw that some of this
liquid mud you said coming
there?

A. Well that was done
in 1862. I think that a
portion of that excavation
was put in — to under-
stand the thing correctly it
is like this; there was a
lagoon there or what you
may call an inland
slough that run up between
the two rivers to some ex-
tent, called Brannan slough.
Well, the idea occurred to
these Commissioners that if —
there had been between this
slough and the Sacramento
river, there was a narrow
strip of land, high bank,
perhaps fifty feet wide and
this narrow strip of land
they excavated, they cut that
across about five hundred or
six hundred feet.

93 Q. My question is after the

Water was turned in, didn't that materially enlarge it by opening it and making a path for itself?

A. No sir not at all?

Q. Never did at all?

A. No sir there was not any perceptible enlargement

Q. How deep did they dig down; six hundred feet wide and how deep?

A. Well they dug down I think about maybe seventeen feet, sixteen or seventeen feet, down to the top within about a foot of the top of low water mark at that time, They left a ridge remaining there until the water came through.

Q. For what length did they excavate that.

about six hundred feet wide and seventeen feet wide and how long is that?

A. I was going to explain to you how they did do that if you will allow me

Q. How long was the Canal?

A. Well there was this slough that extended —

Q. [Intg] State how long the Canal was and then explain how much of it was this slough?

A. They cut from this neck of land there was between this slough and the river about fifty feet, six hundred feet wide, then they went above where the banks of the old American River was and cut about the same width into this slough! I don't know the width exactly that formed a Canal, a direct Canal which conveyed the water from the American River into this slough! then out of the slough by this cutting of this neck of land into the Sacramento River. That made a Canal.

Q. How came the old bed to fill up! that is all filled up level with the

Surrounding land }

A. Well filled in I suppose by the action of the water and that is overflowed there when the American river is high or when the water is high; the slack water in there, the mud collects in there and settles on all that land, both the river bed and the surrounding land; Johnsons land and all the land in there has been thrown in with this sediment and slickens from slack water that backs in there from both rivers Q. The material that comes down the American river would lodge in there and keep lodging in there until filled up?

A. Yes Sir?

Q. Or the water would pass through?

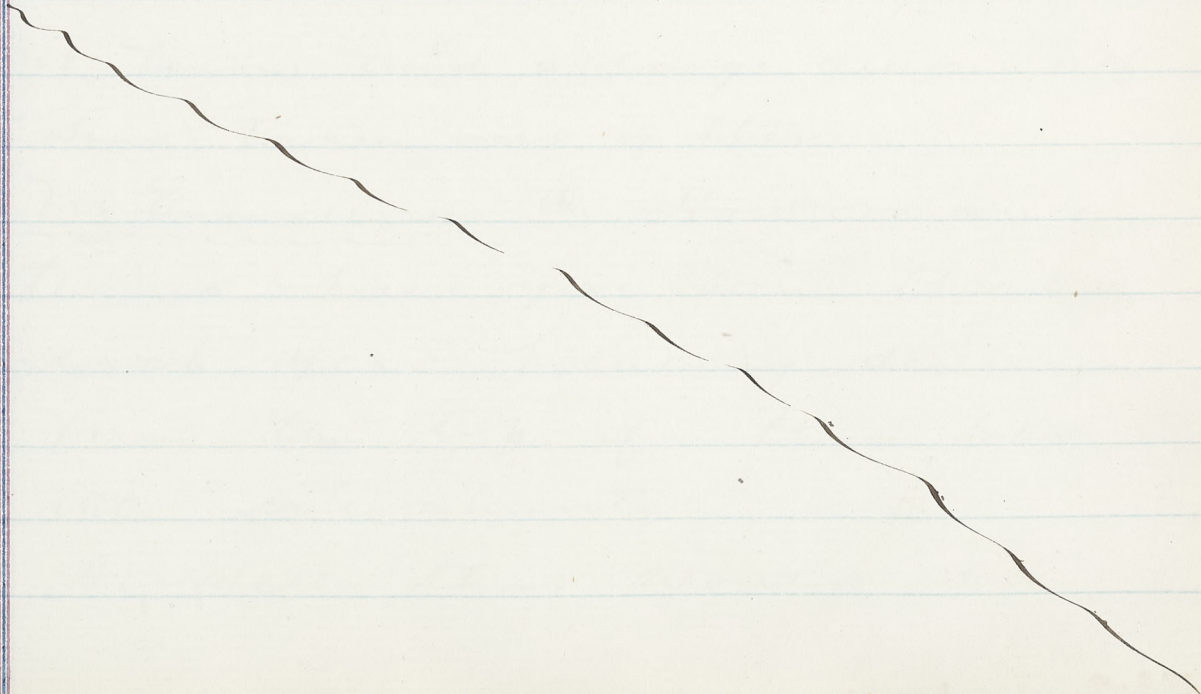
A. Pass through the other Channel, I think they did build a small dam across a portion of the old bed at one time but I am not certain

of that; that is my recollection
 though that they did build,
 I think the second or the
 third year, after they made
 the excavation.

Q. That was merely to turn
 the water? A. Yes.

Q. To make the water run
 into the new bed?

A. To make water run in
 the new bed. I think they
 did build a dam there
 after two or three years
 a portion of the water came
 down into the new bed, it
 spread; a portion of it came
 the new bed and a portion the
 old bed and I think they
 built a dam to confine it
 in the new bed.



Redirect Examination
of

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John Hoagland
Mr Cadwallader

Q. Mr Catlin asked
you whether there had been but one
bar below the new mouth of the
American river and asked you whether
the top of the bar that formed there
each year had not been hauled into
Sacramento City.

A. Yes that is where they have
been getting their sand every year.

Q. Thousands of teams there.

A. Yes large quantities of sand.

Mr Catlin. Q. Mr Cadwallader

said there were a thousand teams.
Did you say so?

A. No sir. I didn't say so.
I said there were a large number
of teams and a large amount of
sand taken out of there.

Mr Cadwallader. Q. How many
teams have you seen there
each year hauling sediment
from the top of that bar
into Sacramento.

A. Well that would be

Very hard to answer

Q. Well what time do they
Commence. }

A. They usually Commence
along in August depending on
the stage of the water a little.
August and September and
October and on until the
water Comes and drives them
out.

Q. And they haul the top of
the bar into this City do they
not }

A. They have on two or
three occasions, hauled I think
nearly all of it, so far as the
water would let them. I think
the Railroad people hauled on
two or three occasions until
they got down so that the water
interfered with them, but every year
they have been in the habit of
hauling that bar away more
or less. They are a large number
of teams engaged there now at the
present time

Q. Your impression is that
that bar is swept away every

Year? A. Yes Sir That is ⁴²⁰
my idea: that it is swept away
by the water of the Sacramento
And each year a new bar is
formed by the American.

A That is my judgement
about the water, It may not
entirely be so but a large portion
of it is swept away, no doubt
every year,

Q. Now you spoke about the
passage of the American river
across the Sacramento paralyzing
the water of the Sacramento above
it, that is so isn't it?

A Yes.

Mr W.C. Belcher If the Court
please, I interpose this objection!
That he is going over the same
matter that he has already gone
over in his direct examination
It is simply repetition.

The Court I suppose that
is introductory to something
else.

Mr Cadwallader - Yes Sir
The Court I do not know
what the Counsel is trying to get at

Mr Godwallader Q. now, describe 421
to the Court the passages of
the American river across
the Sacramento. I want you
to describe the physical phenomena
attending the passage of the
American river across the
Sacramento?

A. at what time? at
any time?

Q. Since 1867 in the stages
of high water when the
American is high what is
noticeable?

A. The American river
I think, you may say on
every occasion, or at least
generally rises three or four
days after a heavy storm
before the Sacramento does
and when it comes down
in a flood it strikes immediately
across on to the west side and
controls the entire current of
the streams from there down

Q. I know, but what.

Kind of a current did it
make in crossing.

A. Well There is scarcely any Current above.

Q. I know but does the American River Current manifest itself by waves

A. Oh yes.

Q. High waves? A. High waves. It swells coming down the river in high swells and continuing on down.

Q. Are those big swells visible from the bridge?

A. Yes sir.

Q. Three quarters of a mile off?

A. Yes sir.

Q. So, or do not steamboats have difficulty in getting across that part of the river?

Mr W. C. Belcher We make the objection that this is leading

Mr Cadwallader Well state what impediment if any it offers to navigation, this Cross Current?

The Court What is its effect upon the navigation of the river.

generally avoid those swells as much as they can, and get into shoal water on the other side. All kinds of crafts do for small crafts it is impossible to go any where near the mouth of the american river, They cannot get passed at all. They generally strike inland and go in any way, get in, in the brush. Steamboats generally avoid it by going on the other side if possible.

Mr Catlin Q. Steamboats

Keep ~~along~~ along the west shore }

A. Along the shore, Yes Sir.

They keep ~~along the~~ shore out of the current

Mr Cadwallader Q. How high

will those waves be at times

A. Oh. Those will be as far as you could judge by the eye, three or four, or five, or six feet high. They seem to be just as if there was some impediment out at the mouth, some obstruction

like. It will spurt ~~away~~ up
 And twist around and
 Make a big swell
 I notice it at my place there
 during the high water. Some-
 times the water would
 bulge up seven or eight
 inches perhaps a foot inland
 out of the banks'

Q. What would be the con-
 dition of the Sacramento River
 above this Cross Current, as
 to turbulence or quiet?

A. The Sacramento would
 be no current in it scarcely
 at all—no perceptible current

Q. It would be like a mill-
 tail — I mean a mill pond }

A. That state of affairs,
 though, generally lasted only
 a few days, two or three days
 perhaps, when the upper waters
 come down again it equalizes
 the current, and the American
 subsides and the water backs into
 the American.

Q. state ~~is~~ what pro-
~~portion~~ are the different pro-

portions of water doing the damage from the American and from the Sacramento what would be the relative proportions of water of the Sacramento and American crossing your land?

A. Oh the damage would proceed from the American the force of the current on that shore, There is no doubt of that.

Q. What would be the relative proportions of the Sacramento water and the American water in those occasions? A. I don't think that the water from the American river would do it any damage at all or from the Sacramento.

Q. You don't think what?

A. I don't think that the water from the Sacramento has any effect on our shore at all.

Q. It would not have

5 Any effect on it at all

A. As it was originally the old current of the Sacramento was on the east side and it was slack water on our shore before the change was made. The channel was on the east side opposite to our shore before the American river was put in there.

Q. What direction would this American river water take after leaving your place?

A. Well it curves around and takes a direction towards the east end of the bridge after it passes down for two thirds of the way.

Q. Wouldn't it hug the western shore?

Mr Catlin I object to that question as leading?

Mr Codwallader I have the right —

Mr W. C. Belcher To lead your own witness?

Mr Codwallader I object to more than one counsel making objections

The Court I would hardly
make the rule so strict as
that

Mr Cadwallader Q. State if
you know what would be
the course of the American
river after leaving your
place with reference to the
western margin of the tules
or the eastern margin of the
tules.

A. You mean where the
water flowed over my place?
Q. Yes Sir? A. While
it is confined in the stream
in the bed of the river?

Q. When the American river
crosses over—

A. When the water
crosses over the direction
would be in a south
westerly direction into the
tules

Q. How close
to the eastern margin of them.

Mr Catlin I object to that
as irrelevant and immaterial
The Court I don't see the
particular importance of this

investigation

Mr. Cadwalader I want to show that this water presumably did not crop the tules

Mr. Cahlin We will withdraw the objection if you think it is material

Mr. Cadwalader That is what I asked you; whether the water did not continue down the Yolo shore on the inside

A - Well, the water passes over into the bottom land as we call it and spreads out. It is confined sometimes to different sloughs running in different directions. Some of them run right along the shore a portion of the way and then turn out just depending as the sloughs become clogged up with sediment. Last year a good portion of the time, the water passed down over my place, then turned in an easterly direction and passed down close to the margin of the high lands and crossed the road at what is

Known as the bridge there and kept straight down along the high lands. That was the main Slough

Q. Along the river shore?

A. Along the river shore. Then there was another Current that went through Washington from the lower break more particularly, which passed out in a westerly direction out along the line of the road and then turn in a South-Easterly direction and ran right down along on the high lands to an outlet. That was the Course of the water took last year and was Confined apparently to two main water ways, with high foundations of sand between them

Q. That is, the sand shows the track?

A. Yes, the sand shows the track of the two streams the main stream that passed in that direction from the overflow

Q And that is substantially the margin of the tiles?

A. Yes sir, Q. The eastern margin of the tiles?

A. One of them is: and the other is running through about the centre of that arm of the tiles: The one that went through Washington is along the eastern margin of the high lands and the tiles and the other is about through the centre I think.

Q. In other words the track of the American river is marked by sand deposits

Mr Catlin I object to that question

Mr badwalader I will ask you this question: you spoke of there being an up stream current here in early times

Mr Catlin I object to that That is certainly going over ground which you have already asked him about

Mr badwalader No I didn't you brought it out.

The Court I don't remember

in the direct examination about that

Mr Catlin - Perhaps it was in the cross-examination

The Witness - I stated at the time, that 1867 was the time, the bank at my place was washed away, that the force of the water coming from the American river, striking the bank, created as it were two currents, it struck the bank and a portion of it whirled around, and ran up stream for nearly a mile. The current whirled around creating one of those whirls, the other passing down in the same manner, down along the banks. This occurred before the water was over the banks or before the river had raised to the top of the original banks. The main destruction of this bank at that time as I once explained before, occurred before the water was high enough to pass over the natural banks

The bank was destroyed by the force of the current until it was undermining the levee. In two days, on Christmas day, or on the afternoon of the day before Christmas, about four o'clock that afternoon the current had reached under the levee, still it was not bank full. It was not as high as the natural bank, but raised that night much higher, and the levee and bank all went in, trees, houses and every thing else. That was the time. Until some time in the middle of the night the water had not raised high enough to run over the natural bank, but after the levee would give away it then forced itself over the natural bank, but the main destruction to the bank, was before the water was high enough to go over the natural bank.

Q. You understand now that this tidal influence is all lost? A. Yes Sir

Q. You see no evidence of it since the river filled up?

The Court - Q. This is not the tide you have been describing at all

A. No Sir. Q. This is not the ebb and flow of the tide?

A. Oh no Sir. This is the force of the water at the time that the place was destroyed in 1867.

Q. Counsel was inquiring of you about the tidal flow

Mr Cadwalader Q. About the changes in the tidal influence, how long you noticed the tides up here. A. Well along up to 1860 I was in the habit of being on the river most every day up to that time, but we noticed it after the flood of 1862, and sometime after that there was no perceptible tide.

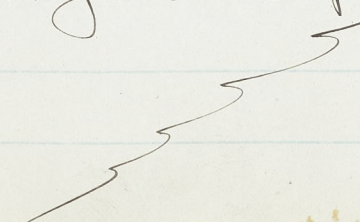
Q. The flood of what year?

A. 1862, after the river went in there - after the American river went in there. There never was any perceptible tide although I think I have

noticed sometimes when I was on the bridge, that the water did rise a few inches apparently I know when the boats used to stick on the bar there, the boatmen did on some occasions think the tide would affect it sometimes when there was a strong South wind

Q. You wanted to make an explanation during one of Mr Cathers questions and I will ask you to make that now

A. I just made it. That is what I made now in regard to the action of the American River on the bank at my place. He put the question in such a manner that I was not able to describe how the water destroyed the bank. It was not by the height of the water and the overflowing of it, but by the force of the current against the bank which destroyed the property.



Re Cross Examination of John Hoagland

Mr Catlin Q. Mr Hoagland how was the break at the English levee made? How did the water act upon that which caused that break?

A. The English break is situated above an arm of the Sacramento where it makes a short angle and comes around by Bytles place almost an elbow in the river. The waters accumulate from both rivers at that point. As I said before when the American River is high it runs across that bottom and empties out into the Sacramento all along and particularly at this point. This has been a dangerous place for a number of years always considered so. The English break, and it was down for a number of years, and became a very

deep cut, and it was built up on two occasions, I think by the County partly.

Q. Well never mind that history. You have described now very closely how the break occurred at your place right opposite the new mouth of the American River. Describe how that one broke two miles above.

A. At this place the water broke a very deep cut, the water passing through there I think three or four years, a number of years at least without being put up

Q. Did the river there cut into the bank to break the levee. And carry the levee and the bank away?

A. The bank at the place, there had been there ^{for} a number of years a slough through there

Q. But you don't answer my question: did the

river, the action of the water on the banks there cut the bank away and wash the levee away and break through.^a

A. Oh, I could not answer that question because I was not there when the break took place.

Q. That was not caused by the direct blow of the American River through its mouth against the bank of the Sacramento, at that point, was it?

A. Oh no, I don't know anything about that I never was there at the time the break took place.

Q. You described to Mrs. Cadwalader just now how this material which was lodged by the American river, that it lay along a portion of ~~the~~^{it} and the western margin, the eastern margin of the tule. Another portion went out into the

tule.

A. I said the water that came through those breaks.

Q. It lodged sand there?

A. Yes.

Q. Did they hurt the tule any?

A. It did not hurt the tule any particularly as I know of.

Q. Has not it benfitted the tule land wherever it has been deposited?

A. I think not Sir

Q. What was the tule land worth there?

A. A large portion of it on the margin was worth considerable for pasturage or feed. There always was feed on these lands. In fact it was the best late feed they had.

Q. Do you mean to say that wherever these deposits in the river have spread out into the tule, where these high tules grow that it is not understood and

known to be beneficial to that land?

A, I think not. Nobody recognizes it as such. There is nothing done with that land it is an. Every one who has attempted to do any cultivation on it has failed at every place I know of.

Q, I am not asking you that, They did not do any cultivation on the tule here, did they?

A, On the margin of the tule they did, clear-cut to the tule in some places.

Q, Did they cultivate any cut into the tule?

A, I say at the margin of the tule to some distance.

Q, You say went to the tule in some places, what kind of cultivation was that?

A, The tule land in some places is not of course high tules; what are

understand by tules are portions of it that are higher and have been cultivated patches of it very successfully.

Q. Cultivated to what?

A. Raising vegetables of different kinds. Potatoes have been raised there.

Q. Is there any place that vegetables have been raised in the tules?

A. Yes Sir, back of Doctor Curtis' and back of Jebb Wilson's place, all those lands down in there, they dip out into the tules late and plough them up and raise vegetables there.

Q. How much land is there ever in Yolo County that is cultivated to vegetables right in among the tules?

A. Oh I don't mean the height. I don't understand me to say in the centre of the tules. I mean the margin of the tules.

Q, You mean just outside of the tules?

A, I mean the margin that dips down into the tules. This land slopes into the centre. There is always a low place in the centre.

Mr Cadwalader Q, The tule lands are considered the richest lands in the State are they not?

A, Yes, take the margins of the tule. I don't mean the heavy tule growth but the margin of the tule.

Q Do you recollect where Nathan Coombs established his race track in 1892?

A, Yes Sir

Testimony
of
Wadsworth Stady do

called her plaintiff. Now
Mr Stady - Q. Captain where
do you live?

A. Washington

Q. How long have you
lived in Washington?

A. Thirty one years, a
little over

Q. When did you come to
California?

A. I came around Cape Horn
in 1849.

Q. How did you come?

A. By sailing vessel.

Q. Where did you land
when you came to this State?

A. Well I stopped in
San Francisco

Q. How long?

A. A week or two - two
weeks perhaps.

Q. And from there where
did you go? A. Sacramento

Q. How did you go to

Sacramento?

A. I came up in the vessel, sailed up.

Q. What vessel.

A. There was a brig called the Hodgdon, the same name as my own.

Q. The same vessel that you came around the horn on?

A. Yes Sir

Q. What was your occupation or had been your occupation at that time?

A. Seafaring man, sailor you might say.

Q. Do you remember the month that you arrived in San Francisco?

A. Well, I think it was in March 1850th.

Q. Going up the river did you notice the general character of the Sacramento River?

A. Yes I did

Q. What kind of water flowed through it? Clear or muddy?

A. It was clear water, fresh

water

Q, You say it was clear water?
A, Yes Sir

Q, How clear, could you give us an example.

A, Well I can remember of seeing fish on the bottom up here at Sacramento

Q, on the bottom of the river?
A, Yes Sir,
There must have been twenty five or thirty feet of water there.

Q, You could see the fish then twenty five or thirty feet below the surface of the water?
A, Yes Sir

Q, Did you bring anything up in your vessel at that time?

A, Oh yes, I had the most of the cargo that I brought around.

Q, How large a vessel was this?

A, She was between two and three hundred tons.

Q, Did you know of any

other vessels coming up about that time?

A. Oh yes every day.

Q. About how many did you know of coming up?

A. Well I don't remember

Q. Well was it two, or three or a great many?

A. Oh! a great many.

Q. What was the general character of the vessels that came?

A. They were large vessels that came around Cape Horn.

Q. Ocean vessels, ships or schooners or what?

A. Ships, brigs, schooners and barkes.

Q. All kinds?

A. All kinds, large vessels.

Q. Did you see any coming up that were very large that you could describe here and if so what were the largest ones?

A. Well, I don't remember particularly about them coming up. I know when I arrived here there was a great many

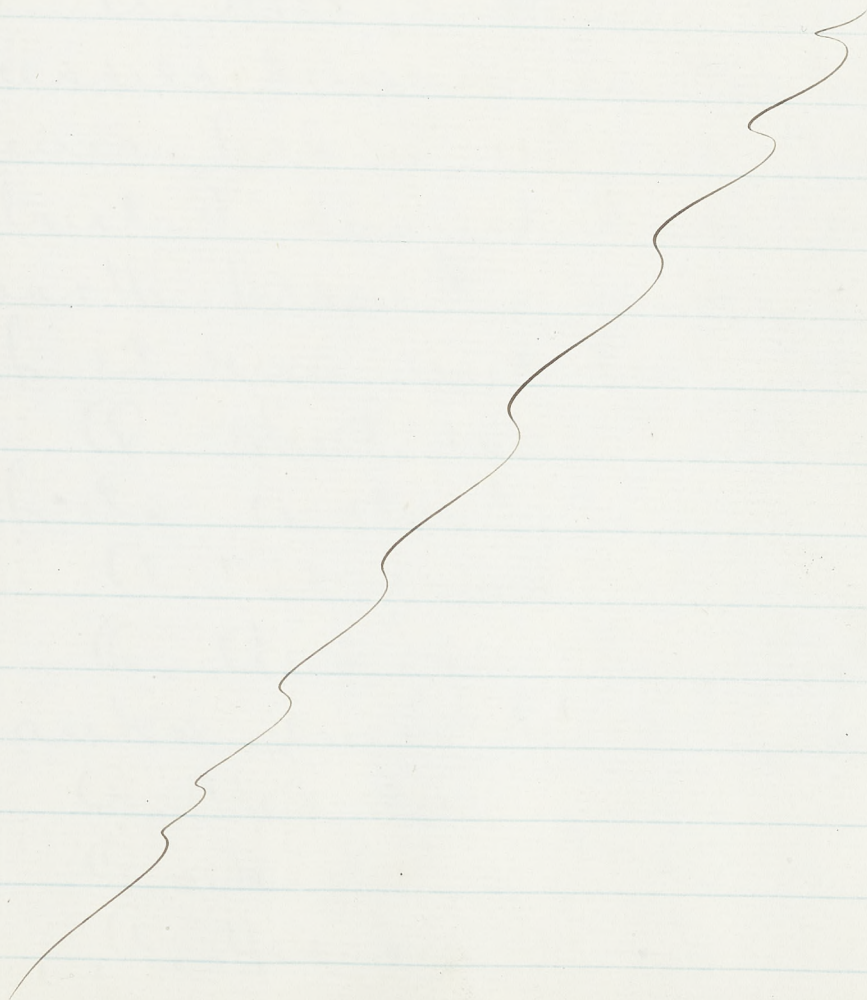
laying along side the banks
along the river, there
must have been two or
three hundred sail,

Q. How much?

A. Two or three hundred vessels.

Q. Did you notice any
of any considerable size,
and if so, what was the
size of the ships?

A. They would average
I should think from two
to four hundred tons.



Q. At that time or about that time did you have occasion to notice the American River?

A. Yes.

Q. What kind of a river was that Mr Hodgdon?

A. Well perhaps for half a mile up to the mouth of the old American River it was very steep banks and pretty deep as deep as the Sacramento.

Q. Was it Capable of Carrying large vessels too in the summer time, bloating them?

A. Well, I know there were vessels laying in the American river from about opposite 4th Street I should think to the north from the end of 4th St if it ran out that bar.

Q. What was the Character of its water?

A. It was clear.

Q. And you say that the banks were bold and steep?

A. Yes Sir

Q. High?

A. Yes Sir.

Q. About how high above low water mark?

A. I should think twenty or twenty two feet.

Q. Did you notice about the height of the Sacramento River the banks of the river above low water mark?

A. Yes, it was twenty two feet opposite Sacramento here

Q. Opposite Sacramento twenty two feet?

A. Opposite Sacramento twenty two feet

Q. What did you say was about the average depth of the Sacramento River up and down from San Francisco to the city?

~~A. For a mile up and down the Sacramento opposite the city between here and Washing-~~
~~ton at the lowest stage of the~~
~~water, between here and Washing-~~

ton at the lowest stage of the water in 1850, I should think it was twenty two feet deep

Q. Twenty two feet?

A. All the way across, yes Sir from shore to shore.

Q. That is you make the banks from the bed of the

river, the high banks barely
bear feet above the bed of
the river?

A. The bottom of the river
yes.

Q. Yes the bottom of the river

A. I should think so, just
about.

Q. Have you ever noticed
since your residence here
the nature of the Country through
which the Sacramento runs,
whether it runs through a flat
or basin or runs through a
ridge.

A. The Sac-
ramento River runs through
a ridge.

Q. How did the American
River in 1850 compare with
the Sacramento in that respect?

A. It runs in a depression
a hollow.

Q. In a hollow?

A. I think so, yes.

Q. Were the banks
of the Sacramento
river higher than the banks of
the American River?

A. No. I don't think they were not at the mouth.

Q. What I want to know is whether or not the American River at its mouth runs through a ridge or run through a basin or hollow?

A. At its mouth?

Q. Yes. I speak of the banks of the river?

A. At its mouth it probably ran through a ridge but when you got up a distance it of course runs in a basin. When you got up into the foot hills - when you got up into the high lands.

Mr Catlin - when it gets up to the foot hills?

A. Oh, it runs through a hollow, a depression.

Mr Stark - Upon the banks of this river, this American River did you notice any trees, and if so, what were their character from 1850 up until recently?

A. Well, how far up?

Q. Well up say for several

miles above Sacramento

A. I dont remember particularly about the banks of the river. I was never up there very much

Q. Well up above the mouth of the river, same distance did you notice any trees there?

A. I dont remember about the trees.

Q. You do remember that the banks were bald and high there?

A. Yes for a distance up

Q. Now of what character of soil were the banks composed?

A. Well I think black adobe soil.

Q. Have you seen those banks recently?

A. No I have not

Q. How long since you have seen the American River near its mouth?

A. Why I have not been there as it for I dont know how many years. I see it every day in crossing the bridge. I see where the old mouth

used to be,

Q. What Kind of a Country is it there now as compared with its former condition in 1850?

A. Well, there is no mouth there. There is nothing to show that there ever was a river there. It is filled up with sand as high as the land adjoining on each side. There is nothing to show that there ever was a river there.

Q. You say that it is filled up with sand? A. Yes sand and sediment.

Q. Does that look anything like the soil surrounding this river that used to be on its banks? A. No.

Q. What is the difference?

A. One is coarse gray sand and the other is black alluvial soil, rich soil.

Q. What is the character of this sand that you speak of when it gets dry. If you step on it, does it make a mark of any kind? Is

it hard or soft?

A. Oh it is soft. It is coarse gray sand.

Q. Do the particles of sand adhere to each other or are they simply loose?

A. Loose.

Q. Loose sand.

A. Most of it is loose?

Q. What has been your occupation since 1850?

A. Well farming.

Q. Along the banks of the Sacramento River. A. Yes Sir.

Q. On which side?

A. On the Gold side.

Q. Have you noticed during the last ten years the character of the water that came down the American River?

A. Yes I have.

Q. What has been the character of this water?

A. It has been very muddy.

Q. What kind of mud does it carry? A. Well it looks a reddish appearance, yellowish.

Q. Only a little mud and does it carry a great deal of mud? A. It carries a great deal of mud.

Q. Have you noticed the waters of the Sacramento river above and below the junction of the American with it

A. Yes

Q. What is the character of its water? A. It is not muddy.

Q. Not as muddy?

A. No it is clearer

Q. What is the comparative quality or qualities of the Sacramento River water above or the Sacramento water below the junction of the American river with it?

A. Well of course it is more muddy after it mixes with the American but it don't really mix with the American river until it gets below the town of Washington

Q. What direction does the

water of the American River take when it comes into the Sacramento?

A. It depends on the stage of the river

Q. How is that?

A. It depends on the stage of the river

Q. I mean when the water is at ordinary high water mark

A. Well the water goes in the Sacramento river on the West side and the American goes on the East side

Q. And there is a dividing line between the water

A. Well at low stages you can see it very distinctly but when the river is up to its highest stage you can not see the line.

Q. You say you can not see the line?

A. Yes. when the river is up at its highest stage you can not distinguish any difference between the Sacramento water and the American

Q Do you know where the mud goes to, that comes down the two rivers?

A. Well a good deal of it deposits along the bed of the rivers and along the banks

Q. Have you noticed any object of depositing this mud carried by the water of the river in the bed of the river its-self of mud or sand it is all the same

A. I notice it fills the river up very much.

Q How has it filled the river up since you have known it?

A. Well, I suppose that in the last ten years it has filled the river up two thirds of its original capacity, I don't know but more.

Q. What do I understand you to mean by filling it up there?

A. Why depositing it in the bed of the river and along the banks

Q So as to raise the bottom of the river up? A. To raise the bottom of the ^{river up}
Q. And reduce the carrying capacity of the river? A - yes

Q. Has that had any effect upon the depth of the water in the summer time? A. Why certainly it has.

Q. What effect has it had?

A. Well in 1850 there was 21 or 22 feet of water opposite the City all the way across from shore to shore.

Q. What would carry what kind of vessels? A. It would carry a vessel drawing that much water. It would ~~not~~ carry a vessel carrying 22 feet of water.

Q. And how many tons draft?

A. She might be a great many tons, might be two or three thousand tons.

Q. But it would carry what you would call a large or small vessel? A. A large vessel.

Q. How is it about it now?

A. Well it would be impossible for a vessel drawing ten feet of water to get up here now, at the low stage of the river.

Q. I will ask you whether or not the vessels you saw here in 1850, could get up the river at this time, the summer time. A. They could not

Q. Could they in the winter?

A. I don't know

Q. You don't know whether they could in the winter or not but they could not in the summer?

A. They could not in the summer.

Q. Do you know whether or not the filling up of the beds of the river has had any effect upon ordinary river navigation

A. Why of course it has ruined the navigation of the Sacramento River

Q. It has ruined the navigation?

A. Yes

Q. State to the Court why?

A. Why it has filled up the bed, the water is so shallow that a vessel with any considerable draft can not get up or down

Q. Did you ever know of a steamer being lodged in the sand

here so that it could not get up the river? A. Of late years I have, yes.

Q. Shoaled in any way?

A. Of late years, yes.

Q. When did you know of that? Name an instance?

A. Well the first I remember of it was I think, in 1865 or 1866. I don't remember the date I would not say positively about the dates.

Q. State the Circumstance Captain.

A. I would not be certain as to the date but perhaps ten or twelve years ago there were very large steamers plying between San Francisco and Sacramento. I don't remember how many perhaps half a dozen. The steamer Senator and New World and Wilson G. Hunt and Hartford - large boats, ocean steamers. They formerly used to ply between San Francisco and Sacramento as passenger boats.

Q. For how long a time did they do that? A. I don't remember. From 1850 for a great many years, I could not say when they stopped, but large boats according to my remembrance, boats of any considerable draught had to stop running about 1865 or 1866.

Q. Did you ever know of their binding it impossible to get up, and if so state the circumstance? Say if in 1865 or 1866 you know of any thing of that kind?

A. Yes. In 1865, I think or 1866, the first difficulty occurred. That is my remembrance. The boats had to land down to R street, some where ^{or below R street} somewhere about R street, near it or below it. It might have been above it. They could not get up to the landing; could not get up to R street they could not get up to their landing.

Q. The landing was on what street? A. K street.

Q. On the boat at K street
A. Yes

Q. You say they could not get up further than R street?

A. I think it was about R. Street.

Q. When did you first notice any material change being made in the bed of the river so as to affect its navigation? A. About that time about 1865 or 1866

Q. Since that time have any of those large steamers run up here? A. I have not seen them. I don't remember if they have

Q. Is it possible for them to run up here now in the summer time? A. No I don't think the Senator or New World could get up here possibly

Q. You say you think the Sacramento River has filled up about two thirds of its original

capacity: how much has the American River filled up

A. Well that has filled up as high as the adjoining land

Q. How deep was that river when you first saw it at the mouth? A. Well it was between twenty and thirty feet perhaps 25 feet at low water

Q. Perhaps how many feet?

A. At a low stage of the river it was perhaps 25 feet deep at the mouth

Q. How far was it from the surface of the water at low water to the top of the bank? A. It was about 20 feet, perhaps more: perhaps 22.

Q. You say that has all been filled up. A. Filled up level with the adjoining land

Q. State whether or not any of the mud, sand, silt and debris of the Sacramento and American Rivers, or either of them has been deposited on any land that you know of

across the river in Yuba County?

A. Oh yes, a great deal.

Q. What sort of a place have you over there. A. Well, I have about 200 Acres there perhaps 220

Q. Have you any orchard?

A. Yes.

Q. How large? A. Well, I had about 15 Acres formerly.

Q. Where is your place located

A. Directly opposite the city

Q. Opposite what part of the city?

A. K. Street

Q. Opposite K. Street?

A. Yes

Q. What effect has this cut in the water had upon your land?

A. Well it has killed the trees mostly.

Q. Has any of it been deposited on your land?

A. There has been no deposit on the orchard of mud, not to injure it

The water has killed the trees;

the stone fruits and injured the apple trees to some extent. The

peach trees are all killed,

Cherries are killed, apricots

and almonds are all killed.

Q. I will ask you if any of the debris or mud or sand of these two rivers has been deposited on any portion of your land? A. It has yes.

Q. What portion?

A. Well I suppose I have 2 Acres in the back part of the town of Washington that is covered on an average three feet deep perhaps last winter.

Q. That is it left a deposit three feet deep last winter alone did it? A. Yes Sir.

Q. Have you received any of that sand and silt on your place before that time?

A. Yes. I have.

Q. How much of your place was covered last winter with sand? A. Perhaps 20 Acres that is in the best part of the town of Washington.

Q. In your orchard?

A. No.

Q. You said that your vessel was one of 300 tons?

A. Yes between two and three hundred tons

Q. What would be the depth or draught of water that that would draw? A. Well if she was loaded she would draw about 13 feet. She was partially loaded when she came up here. I think she drew about twelve feet when I brought her up when I came up.

Q. How long has it been since a vessel like that of yours could be run up this river at the same time of year that you run it up?

A. I don't know, I have not seen any come up for 12 or 14 years certainly.

Q. You say two thirds of this river has been filled up. I am asking you now for your opinion as an expert. You seem to understand these things how long it has been since a vessel of that kind could be run up the river to Sacramento loaded as yours was, drawing

twelve feet of water?

A. Well, it would depend on the stage of the river.

Q. At the stage that the river was when you came up, the same season of the year, the same stage? A. Well, six or eight years, certainly.

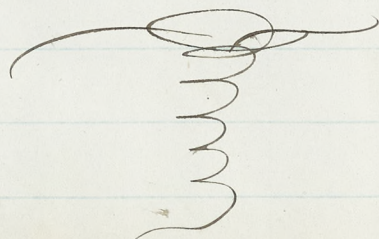
Q. It has been six or eight years? A. Yes.

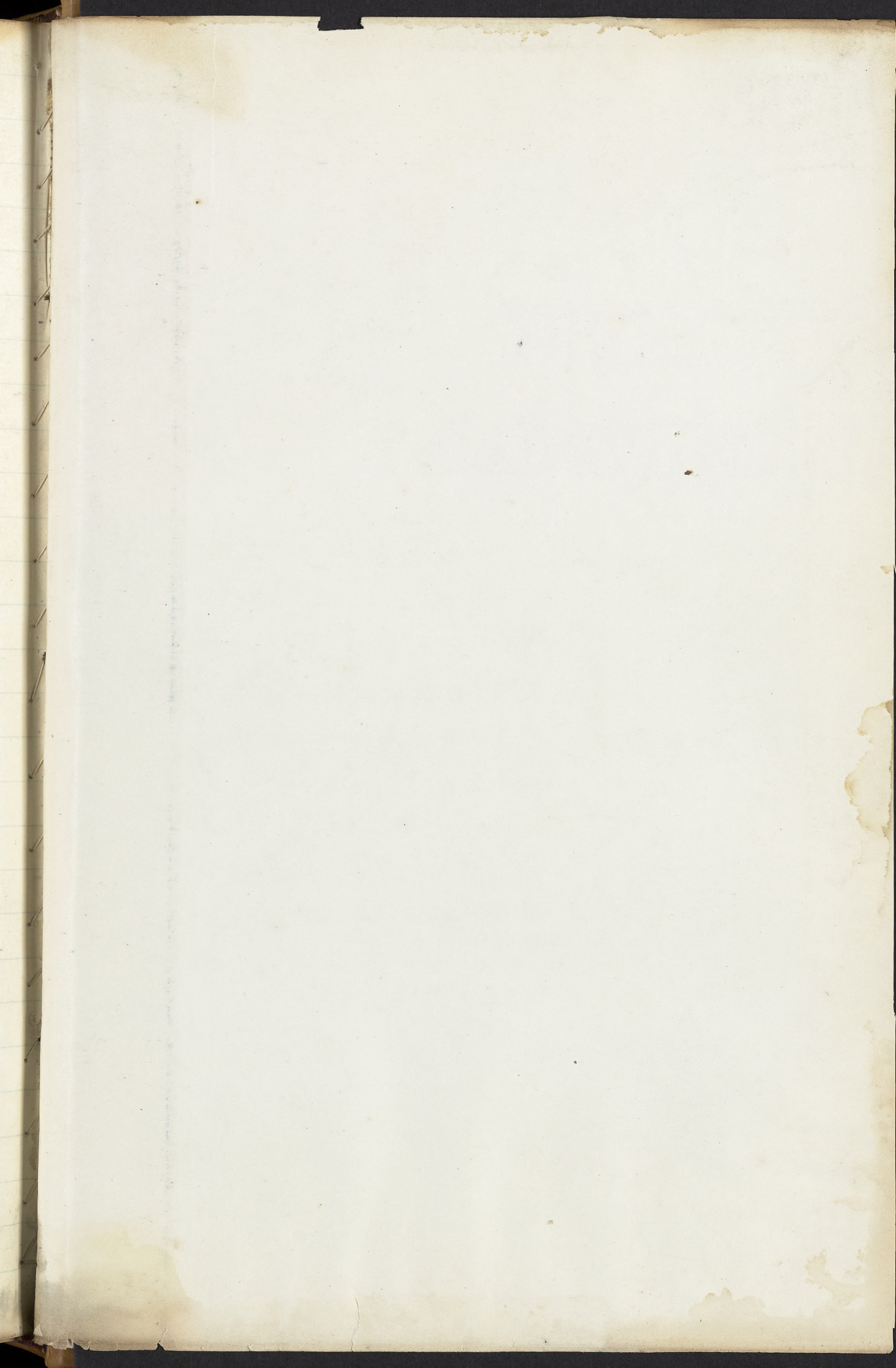
Q. Do you think your vessel could have been run up here last winter when the water was at its highest stage?

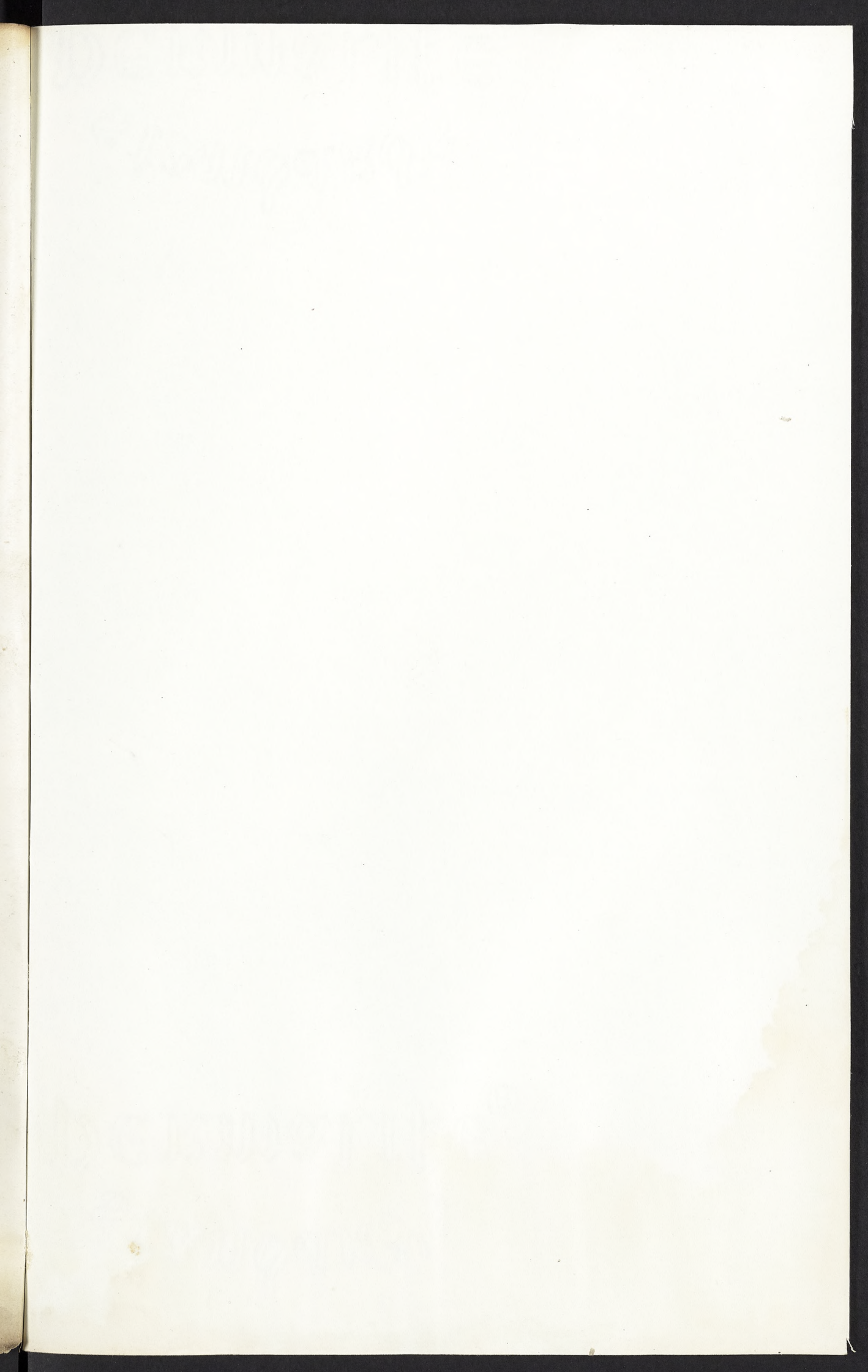
A. I don't know that positively. The water was very high. She might come up back in the tules. I don't know. The water was 27 feet high above low water mark.

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Here the Court adjourned until tomorrow morning at 9.30 o'clock









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